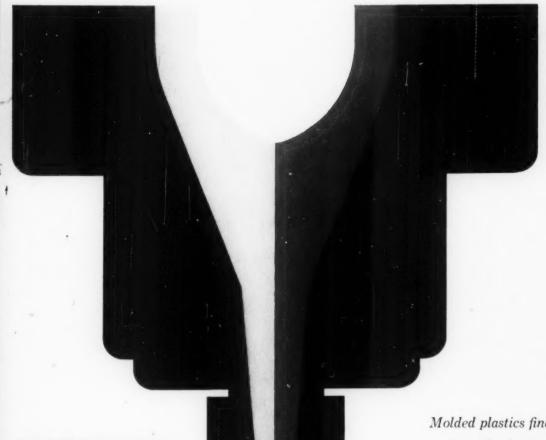
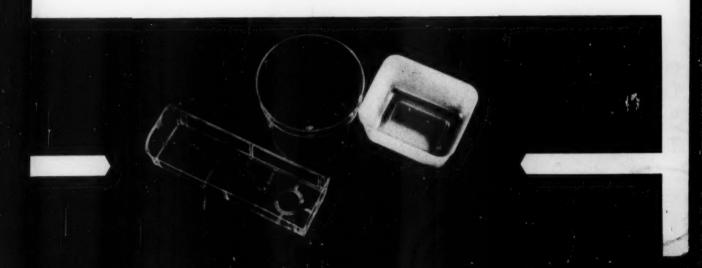
MODERN PACKAGING



SEPTEMBER 1957

Molded plastics find big volume
in packaging as they become
cheap enough to use and throw away

COMPLETE CONTENTS p. 2



for less than 1/20th of a





SOFT SEAL makes cases easy to open

SOFT SEAL is the simple way to make shipping cases easy-to-open. No gimmicks. No new equipment. No extra labor. Why? Because SOFT SEAL simply replaces adhesives that seal with a hard-to-open tearing bond.

SOFT SEAL allows top-flaps to be lifted without tearing, tugging, straining. Protects goods from damage by eliminating case-slashing in stores and supermarkets. Saves time. Builds goodwill.

... all at a cost difference of less than 1/20¢ a case!

SOFT SEAL safely keeps flaps from popping open during shipping and handling. As proved over and over again during ten years of commercial use. We'd like to demonstrate the special adhesive properties of SOFT SEAL in your own plant. Just write or call your nearest National office.

RESYNS



ADHESIVES



NATIONAL STARCH PRODUCTS INC.



Gair has a proven flair for creating cartons that sell. Gair Service is also a proven asset to satisfied customers everywhere. Discover how *your* product can be even more of a prize in a package by Gair—call your Gair representative or write Gair, today.



GAIR

creative engineering in packaging

TAILOR-MADE

PACKAGE SERVICE

BOXBOARD AND FOLDING CARTON DIVISION OF CONTINENTAL © CAN COMPANY 530 FIFTH AVENUE, NEW YORK 36, N.Y.



MODERN PACKAGING

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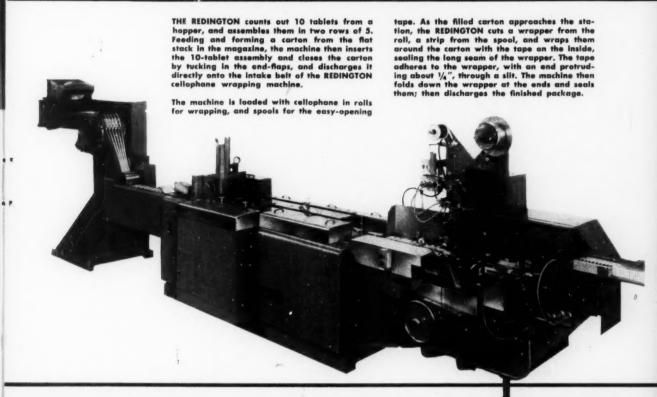
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> Summaries of some of the more important articles, to aid your reading selection

Modern Packaging Executive and Editorial Offices, 575 Madison Avenue, New York 22, N.Y.

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A multi-stage packaging job handled COMPLETE—and AUTOMATICALLY—by this REDINGTON packaging line... at a 200-package-per-minute speed!



★ COUNTS AND FEEDS PRODUCT ★ FEEDS AND FILLS CARTON ★ CLOSES ★

OVERWRAPS *



The REDINGTON illustrated performs this whole series of important steps in packaging "CHOOZ" chewing gum antacid, the product of Pharmaco, Inc., Kenilworth, N.J.—performs them all efficiently, and fast. If the same steps were being individually handled by operators at each station, the labor costs—well, add up the hourly rates in your mind! What is more, the odds are heavy that the production speed of 200 perfect packages per minute simply couldn't be consistently achieved . . . which would mean even more added to unit cost.

This "all-in-one" packaging line is only one of a number of REDINGTON installations which give Pharmaco better, lower-cost packaging of various items in their extensive line.

Some of the jobs are fairly complex, such as cartoning numerous sizes of bottled products, with leaflets included; others are simpler, with just the product to be inserted. No matter what category your products fall into, the right REDINGTON can give you better production, better packages and better costs. Why not call in our engineers now, to discuss the possibilities?

And send today for the free 44-page catalog which describes and illustrates a whole range of REDINGTON Automatic packaging machines!

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The new challenge to selling

Something is happening in the food industry. Something of importance to packaging—and something of significance to all the other industries in which packaging is important:

According to Paul Willis, president of the Grocery Mfrs. of America, advertising agencies face a more searching evaluation of their creative and marketing services than they have experienced at any time in the last 15 years. The reason is that this industry has emerged from a phase, and is entering a new phase.

Since the early 1940s, the chief executives of most grocery manufacturing companies have been primarily concerned with production. They have concentrated their efforts on increasing the efficiency and capacity of their production facilities—with notable success. Costs have been whittled down and output has grown tremendously.

As a result, as Mr. Willis points out, today's major problem is not larger production or more efficient production—but how to dispose profitably of the volume that already is pouring out. And so, the top men in the food industry are turning their attention to the marketing side of the business.

Marketing costs are rising constantly. But competition in the food industry is so severe that the higher costs cannot be added to selling prices. So management, rightly enough, is now concentrating on means of lowering marketing costs through greater efficiency and productivity in the sales force, the transportation and distribution function, and the advertising and promotion departments.

Grocery-product manufacturers, collectively, are now budgeting more than \$1 billion a year for advertising. Creating consumer demand through wise placement of effective advertising, says Mr. Willis, will always be the agencies' principal job. But the agencies must also be prepared to help their clients in competitive selling situations—must be more aware than ever of the implications of packaging developments and trends. High on the list of agency activities which profit-conscious executives will study more closely is the matter of recommendations on package redesigning and label changes.

This new phase—the problem of disposing of, rather than creating, productivity—is by no means unique to the food industry. It offers a tremendous new challenge and opportunity to packaging right across the board.

The Editors



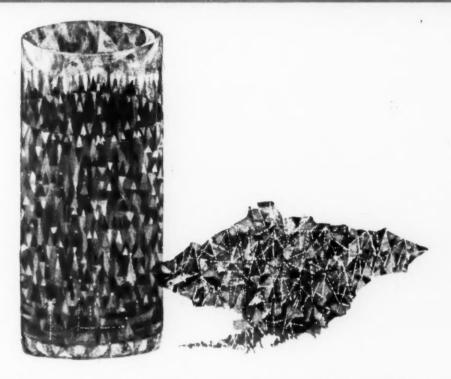
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Every user of Lilt Home Permanent finds the neutralizer ready and easy to mix. For the two ingredients which should be kept separate until used, a two-in-one package of Dobeckmun Metalam is utilized. The Metalam package helps achieve product protection, consumer confidence, and a considerable saving for Procter & Gamble.



Packages for performance...

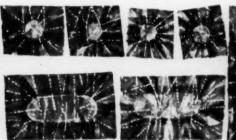


Dobeckmun Metalam[®] effectively meets the exacting requirements of moisture and light sensitive products such as antibiotics, instant foods and cosmetic lotions. Metalam is a lamination of aluminum foils to plastic films and papers, available plain or colorfully printed to identify, to promote and to attract new customers for your product. This unique Dobeckmun material is proof against moisture, heat and grease, is heat-sealing, nontoxic and durable. It is also economical—performing flawlessly on high speed machines.

From the loading point to the moment of consumer use, your product is packaged for performance by

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Spray in any direction . . . even upwards to get at underside of foliage . . . with this modern spray gun designed with easy-fill top and anti-clog vent. Sealed, waxed, tamper-proof cylinder provides moisture protection as well as efficient, positive pumping action. Non-curling valve opens wide on back stroke . . . closes snugly on forward motion. Available with a variety of top plugs.

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HARCORD

HARCORD MANUFACTURING CO., INC. 125 Monitor St., Dept. MP-9, Jersey City 4, N. J. New York Telephone: BArclay 7-5685 ammunition for insect control is one of the many areas where Harcord packaging plays a big and budget-conscious job... because these adaptable paper canisters are so well suited to the insecticide field. Let Harcord engineering "know-how" produce the canister that will economically suit the purpose of your product.



Sears Roebuck & Co. puts many a label on HARCORD containers. This fast-selling cross country Fruit Spray uses a square, sturdy shaker can . . . because it stands up well at the counter, in mail order shipment, on the garden shelf. HARCORD quality and competitive price protect the contents . . and the profits!



Dupont Garden Dust package illustrates the versatility of this Harcord canister. Comes with semi-perforated or plain plug. Metal ends plain or enameled.

Short-cut packaging

that cuts costs too...



Just tape or tie the flexible Ger-Pak liner and you short-cut your protection problems...seal out moisture, dust, contamination. But that's only the start. The tough, chemically inert film protects inner surfaces of the container, practically eliminates costly cleaning—speeds return of your shipping drums. Even more important, Ger-Pak also helps you lower costs by reducing need for heavy, bulky containers—just use lightweight shippers with a Ger-Pak liner.

It's easy to use Ger-Pak plastic liners. The pure, uniform polyethylene film is available in tubing and flat sheeting in most any required widths—unlimited length. Simply use like thin paper, tie with cord, wire, tape or heat seal. Extra advantages are yours with Ger-Pak thin tubing. Just cut to length, heat-seal bottom...insert into container and seal or tie after filling. You short-cut shipping time and work, get a better package. Ger-Pak is highly resistant to acids, alkalis and other powdered and liquid materials difficult to package.



Half the fun in gum is flavor, and gum must always be factory fresh. So Dentyne chooses a special Riegel protective paper...one that will not fracture at tightly sealed folds...and that is sure to preserve delicate flavor and exact moisture content. It's pleasure insurance for Dentyne and for American Chicle's other fine products...Grape, Clove, Blackjack and Beemans. When you buy Riegel packaging papers, you too will get:

Dentyne has a reason...

Product protection always, plus...

Paper tailored to run at high speed on automatic machines.

Paper made to your own specifications...plain, laminated, waxed, poly-coated, printed.

Paper that is made right, that will run right, that is priced right.

Hundreds of today's best-sellers benefit from Riegel's uniformly effective system of product protection. You can, too.

Write Riegel Paper Corporation, 260 Madison Avenue, New York 16.

Riegel
PROTECTIVE PACKAGING MATERIALS





ENGINEERING



PRODUCT RESEARCH

LOOK TO NATIONAL CAN for KNOW HOW

LITHOGRAPHY

BSING MACHINERY



Know how and service... NATIONAL CAN style — based on a thorough knowledge of our business and a personal interest in yours — is yours for the asking. Why not let us survey your needs — you'll see how much more you get from NATIONAL CAN.

RESEARCH DEVELOPMENT NATIONAL CAN

CHICAGO . NEW YORK . SAN FRANCISCO ... PLANTS FROM COAST TO COAST





Armstrong design solves packaging problem

The package for this sun-tan lotion had to have sleek good looks . . . yet carry a slight medicinal air that would suggest the product's effectiveness.

This Armstrong package does both. The deep yellow molded cap with its sunburst design blends with the rich Amber bottle in an ideal color combination for the product. The rippled shoulders and easy-to-grip sides make it easy to handle.

Make Armstrong packaging a part of your next package. Armstrong Cork Co., Lancaster, Pa.

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER TUESDAY EVENING ON NBC-TV

GLASS CONTAINERS -- CEL-O-SEAL® BANDS (*) E. I. DUPONT DE NEMOURS & CO., INC.) -- METAL CAPS -- MOLDED CAPS -- EMBOSSED-TOP CORKS -- PA*KAGE DESIGN











looking for a square or oblong box?











TRI-STATE is your source for the world's largest assortment of











Rigid Plastic Boxes...all shapes and sizes





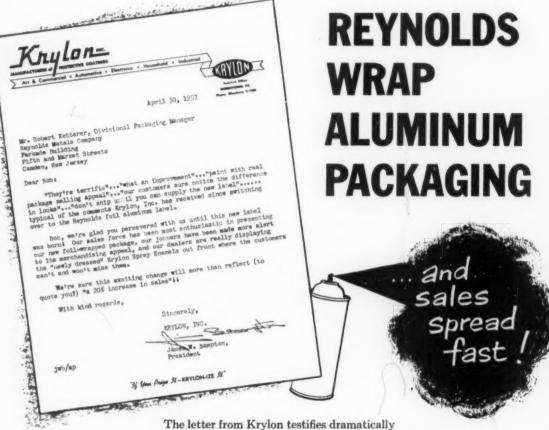








Looks its colorful part...with



to sales success. And the reproduction of the Krylon label on Reynolds Aluminum Foil shows dramatically the reason why. Brilliant beauty!

This is the very least that you can gain for your product with Reynolds Wrap Aluminum Foil Packaging. The most is beauty plus quality protection... against moisture, air, light and odors. Call the nearest Reynolds Sales Office. Or write to Reynolds Metals Company, General Sales Office, Louisville 1, Kentucky.



Powerfully promoted by Network TV, national magazines and spectacular displays, the Reynolds Wrap Aluminum Packaging Seal appears on more and more products...is known and looked for by more and more shoppers!

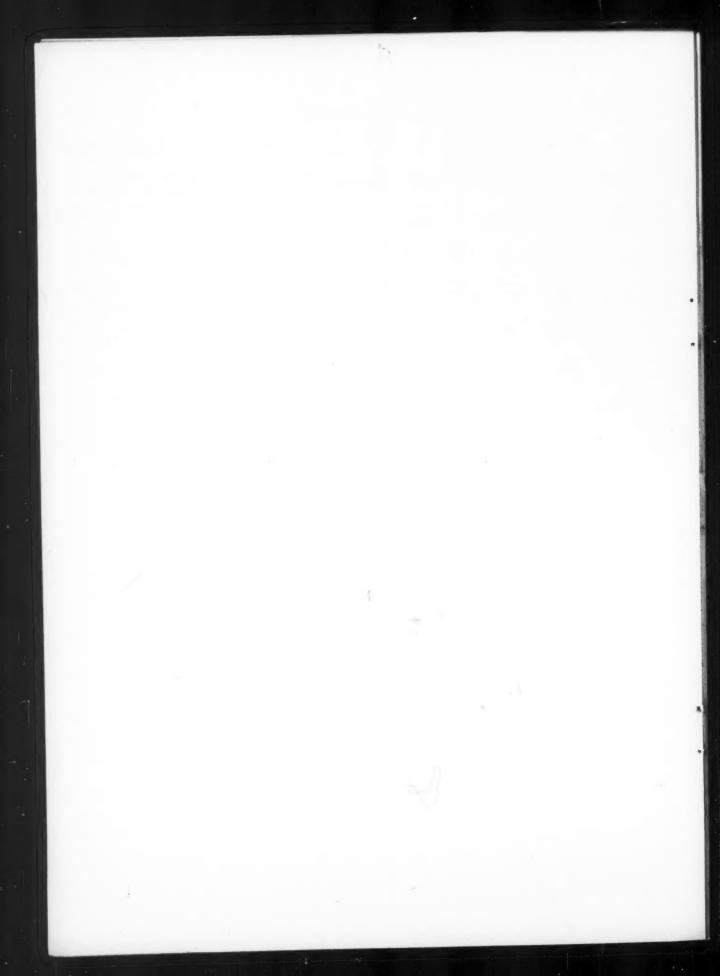
REYNOLDS ALUMINUM

See "Circus Boy", Sundays, NBC-TV. Watch for Reynolds on "Disneyland", ABC-TV Network

Krylon
prizes its product...
beautifies it with
REYNOLDS WRAP
ALUMINUM PACKAGING
...all 18 colors!
"If you prize it...
KRYLON-ize-it!"



1



makes Gibbs rigid plastic boxes cost less!



Polyethylene lids only

It's simple arithmetic! 100% automation accelerates production, cuts overhead, brings prices down to the level of many, not just the few. 100% automation means other advantages too. A better container: diamond brilliance that enhances your product, snug lids that really protect.

An efficient container: nesting cuts shipping costs, warehousing, makes automatic filling and capping a cinch.

Prompt delivery: America's most modern injection molding plant speeds that order to your filling line in less time.

The six Gibbs containers shown here, available in clear and colored polystyrene, with polystyrene or polyethylene lids, enable many more products to afford the promotional and protective benefits of rigid plastic boxes. Imprinting available, up to 3 colors, on lids or sides of containers.

For samples, quick service, quality boxes, low quotes, call or write:

PIBBS AUTOMATIC MOULDING CORP.

Henderson 3, Kentucky Valley 6-9573 Chicago: 500 N. Dearborn St. St. Louis: 4030 Chouteau Ave. New York: 55 W. 42nd St. Objective: Make them reach.

IMPULSE

predictable and profitable

Tempting display is a prime force in the mental decision we call the "buying impulse."

"This "impulse" decision is fast—but not simple. In the market, your package must identify product and brand, sell the desirability of each, and give the shopper justification for buying ... all in a matter of merely seconds.

What since ed to create such a package? Market knowledge and also "people knowledge" - knowledge of what makes a shopper stop, look and reach.

To find out how this knowledge could be put to work on your package, call in a packaging consultant (if your budget permits). Or go directly to a supplier with the experience and stall needed for this vital job.

Lassiter, for one, has broad package design and production experience in many industries. In the food field, for example, we manufacture packaging for practically every type of snack and party item. Potato chip processors alone use millions of Lassiter-produced bags every year.

Ask for samples of successful packages which we have produced packages which reflect the consistently higher standards of our printing and converting.

BONUS: Would you like a complimentary copy of Vance Packard's controversial best-seller on motivational selling. "The Hidden Persuaders"? We have enough for the first fifty requests:

LASSITER

EXECUTIVE OFFICES Chiminity N C DIVISIONS Chicago, III. • Cheltenham Pa

PACKAGE DESIGNERS AND MANUFACTURERS

Cellophage * Palyethyline * Acclate * Vilailm

Persuasive Packaging

Poly bags push plastic boxes



Three sizes of plastic freezer boxes—for preserving fresh-cooked or left-over foods—have been put on the market by Safelon Flexible Packaging Corp., New York. Extraclear polyethylene bags, printed in red, yellow, black, and white, do a self-service selling job. Design and printing by Lassiter.

Cooper's develops sock pack

To attain maximum visibility for their men's socks and women's anklets, Cooper's, Inc. (Kenosha,

Wisc.), originated a new type of paperboard package. It's a combination sock board and backing piece, die-cut to fold around and seal at the bottom of the socks. The pack-



age, produced by Lassiter, is printed in two colors: black and yellow. This package construction is available under special license.

Cellophane wrap cuts packaging costs



Using a cellophane package in place of a tray-and-wax paper overwrap, Cornco, Inc. (Baltimore, Md.) chalked up marked savings for Colonel Puff Caramel Popcorn Bars in semi-automatic packaging. The company is now planning fully automatic production, using roll stock cellophane. The package, printed in orange, blue and white, was designed and produced by Lassiter.



The 36 inches separating counter packages from customer pocketbook pay for every step your product makes—from development to distribution. And profits are governed largely by how well you package your products—and with what. That's why it pays to do business with Campco. Campco offers a complete line of plastic sheet and film in the finish your package demands, including:

STYRENES

Rubbe *Iodified Styrene Sheets and Film – Strong, lightweight, ideal for vacuum forming. Low cost, High impact resistance. Full range of colors—translucent or opaque. From .010" to .187",

CELLULOSICS

Cellulose Acetate Sheet and Film—Strong, ideal for vacuum forming including blister packs. Special formulation inhibits blushing. Film used for wraps. Excellent shelf life.

 $\begin{tabular}{ll} \textbf{Cellulose Butyrate Sheet and Film}-Exceptional strength in thin sections. \end{tabular}$

Ethyl Cellulose - Highest thin section toughness, maximum dimensional stability, lightweight.

POLYTHYLENES

Heavy Gauge Polyethylene Sheet—All conventional forming techniques can be used. Odorless, tasteless, great flexural strength. Ideal for food or chemical packaging.

Rigid Polyethylene Sheet — New linear "low pressure" extruded sheet. High resistance to heat distortion, high rigidity, impact resistant, inert, moisture resistant. Available in Zeigler and Phillips types.

SPECIAL FINISHES

Woodgrain—Available in light or dark mahogany or driftwood. Same color and warmth as natural woods. From .030" to .187" on styrene.

i.eather – An embossed finish simulating looks and feel of real leather. In black or colors.

For print-register work—A new modified styrene for applications where sheet must be preprinted and accuracy of image is exacting. Less than 5% strain pattern. In colors or special blue-white base for printing.

High Gloss – Campco GM finish is the ultimate in surface brilliance. Porcelainlike appearance is permanent, and actually improves with heat of forming.

Lace, marble, abstract designs—in fact any pattern or decoration you can photograph can be reproduced picture-perfect on Campco styrene... with the design bonded into the sheet.

Let Campco help you select the right materials, with the right finish. Many size sheets and rolls available right from stock at lowest prices. For delivery and prices, write:



2718 Normandy Avenue, Chicago 35, Illinois

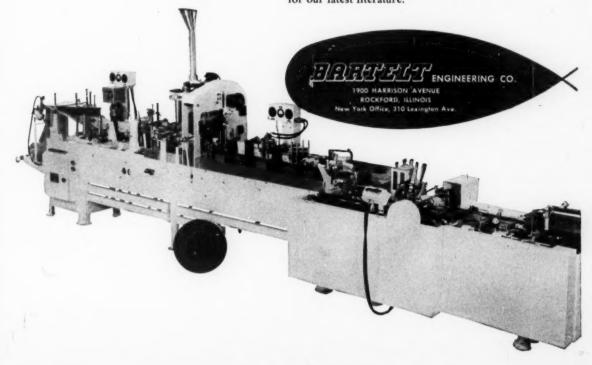
STYRENE • ACETATE • POLYETHYLENE • RIGID POLYETHYLENE
BUTYRATE • COPOLYMER STYRENE

MACHINES for Creative Fackaging"





Modern marketing methods have demanded distinctive as well as utilitarian packages. Bartelt Automatic packaging equipment has always met these needs. A variety of pouches . . . gussetted bottom, multiple compartment, or fin seal, to mention a few . . . may be produced from any material that can be heat sealed. Carton sizes can vary widely and can be set to contain from one to four pouches each. Versatile automatic machinery can give you a package with real sales advantage, and save you money. A few of the great variety of packages that have been run on Bartelt lines are shown. Let us help you with your packaging problems. Write today for our latest literature.



How to plan for filling and sealing your Bracon polyethylene tubes...bottles...cans

Polyethylene Heat Sealing

The technique for heat sealing BRACON tubes and bottles is fast, clean and produces a weld as strong as the sidewalls of the container itself. Briefly stated, the area to be heat sealed is first exposed to radiant heat until the polyethylene has reached the proper temperature. The molten polyethylene is then cooled very quickly by contact with water-cooled metal jaws, essentially remolding the polyethylene. Since hot metal does not come in contact with the polyethylene there can be no objectionable sticking or gumming of the mechanism regardless of the length of the production run.



Tube Filling and Sealing

BRACON tubes to be filled and sealed are inverted and placed with the open end up in holders which are adjustable for the various lengths of tubes available. Most standard tube filling mechanisms can be used; most automatic machines utilize diving nozzles. After the tubes are filled, two holding jaws

close the tube leaving between 1/8" and 3/16" of polyethylene above the jaws. Radiant heat is then applied to this exposed portion until a molten bead is formed. Finally, two water cooled crimping jaws close just above the holding jaws (which hold the tube closed during the entire operation), remolding the polyethylene and making a fusion-type welded closing.



Bottle Filling and Sealing

Basically the same heat sealing method is used for BRACON bottles. The empty bottles are held inverted in metal holders so that about 1/8" of each bottle bottom protrudes above its holder. Filling is done through, the open bottom while the bottles are seated in these holders. Bottles can

be filled by most conventional methods. After filling, specially molded polyethylene discs are then positioned over the open end. These discs are the bottle bottoms and are shaped much like a very shallow cup with the flange or lip slightly larger in diameter than the bottle. The filled bottle, with disc in place, is then rotated under radiant heat until the flange of the disc and the bottom of the bottle itself are heated to the proper temperature. A water-cooled metal patter presses the heated polyethylene of the two parts together to complete the sealing process.





Production Filling for the BRACON Squeeze Can

The BRACON squeeze-can is supplied with metal tops and bottoms seamed to the polyethylene side walls.

Liquid filling is done through the orifice in the metal top on either standard gravity or pressure type equipment. The orifice in the metal top is 9/16" diameter, the same size as the neck opening in the all-metal detergent can. The second and final step is the insertion of the polyethylene dispenser plug. These plugs are supplied already closed. They are positioned over the orifice of the metal top and then seated by a light impact blow. Various semi-automatic devices have been used most successfully for this operation and a fully automatic machine capable of handling 200 containers per minute is now in the final stages of construction.

The BRACON squeeze duster for powders is designed with concave metal top so that the dispensing plug is recessed and the top of the cap is flush with the chimes. The metal bottom plate has a filling orifice of 1-9/16" diameter which is covered by a polyethylene snapfit plug after filling. Any standard powder filler can be used with the squeeze-can riding to and from the filler in an inverted position. The bottom plug is then positioned over the orifice and snapped, by direct downward pressure, into position. Consumers can be instructed how to pry off the bottom plug if the package is marketed as a refillable container. queeze-cans for powders are shipped with dispensing plug and feed tubing assembled



A typical "contract-packer's" production line for filling and sealing BRACON tubes.

Available Machinery

Bradley Container Corporation neither manufactures nor sells filling and sealing machines. However, close cooperation between machinery manufacturers and Bradley ensures that BRACON customers will be able to equip their plants with production equipment that is best suited to their particular need.

A variety of filling and sealing machines for tubes and bottles are available, including laboratory models, semi-automatic and fully automatic production models. Prices range from inexpensive to relatively higher priced units and production rates run as low as 2 units per minute for laboratory work to nearly 200 units per minute for large scale production.

COMPANY	TUBES	BOTTLES	SEMI-AUTO.	FULLY AUTO.
A & M TOOL & DIE CO. Southbridge, Mass.	х		х	X
CARBERT MFG. CO. Moody St. Waitham, Mass. HARING EQUIPMENT	Х	X	Х	X
(Kalix Dupuy Machine) 293 Frelinghuysen Newark, New Jersey	х		х	X
HORIX MFG. CO. 2609 Chartiers Ave. Pittsburgh, Pa.		x	x	×

There are several other machines, now in advance stages by other package machinery firms... Included are conversion components for existing equipment and higher speed, fully automatic machines.

Bradley Container's Technical Service Department will assist the customer's engineering staff in evaluating equipment and refer specific requirements to the machinery

BRADLEY CONTAINER CORPORATION

A subsidiary of American Can Company

MAYNARD, MASSACHUSETTS

New York • Chicago • Los Angeles • Toronto

@ 1957



ANSWER: EACH IS PROTECTED BY

LAMINATED

GOOD, YEAR

THE GOODYEAR PACKAGING FILM THAT SAFEGUARDS PRODUCTS AGAINST A HOST OF HAZARDS AT LOW, LOW COST!

- EXCELLENT MACHINA-BILITY—readily laminates to a wide variety of materials!
- HEAT-SEALS to a welded bond as tough as the material tself!
- NO PINHOLES! Moisture- and puncture-resistant.
- EXCELLENT TRANSPARENCY!
- · GREASEPROOF!
- DIMENSIONALLY STABLE and so low in cost!

PLIOFILM lamination available from leading converters.

And what about STRETCH LAMINATION?

Just Look!

A square of PLIOFILM
this size stretch-laminates to cover a see TMIS SIZE

CLIP THIS

MAIL IT TODAY! Before you buy another laminated package — Get the facts from the Goodyear Packaging Engineer!

You'll be money ahead! Write: Goodyear, Packaging Films Department H-6418, Akron 16, Ohio.

"I would like more information on how laminated PLIOFILM can serve me better. My product is......"

YOUR NAME

FIRM NAME.....

ADDRESS.

Question:

WHAT ONE, GREAT SAFEGUARD DO THE PACKAGES OF THESE WIDELY DIFFERENT PRODUCTS ALL HAVE IN COMMON?

One is a yeast package which must have positive protection against the tiniest pinhole leaks which would allow life-robbing oxygen to get in or the zest-giving nitrogen to get out—

One is an instant potato package which must have an outstanding, bonded seal to safeguard freshness—ruggedness to guard against powdery spillage—

One is a nut package which must be absolutely greaseproof—and at the same time keep out all moisture and air to insure prolonged crunchy freshness and flavor appeal of the nut meats—

WHAT ONE MATERIAL SOLVES EACH AND EVERY ONE OF THESE SPECIAL PROBLEMS?

- LIFT THIS FLAP

FOR THE ANSWER!

They're all PACKAGED IN LAMINATED PLIOFILM -

- Drugs
- Powders
- Dairy Products
- Foodstuffs
- Beauty Preparations

-even bulk liquids!



Good things are better in

Pliofilm

by GOOD YEAR

- better appearance
- · better sealing
- · better protection

-better price!

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



Announcing the merger of

AMERICAN CAN COMPANY and DIXIE CUP COMPANY

—a move that promises better service to all!

Recently, American Can Company and Dixie Cup Company were formally joined to better serve both industry and the American public.

By combining research and manufacturing facilities, Canco and Dixie Cup will be able to devise even better, more convenient products. By uniting management and marketing staffs, these two corporations will be able to offer more efficient, more complete sales and technical service.

In the months and years to come, you can fully expect that *your* industry, and those it serves, will benefit from this merger!

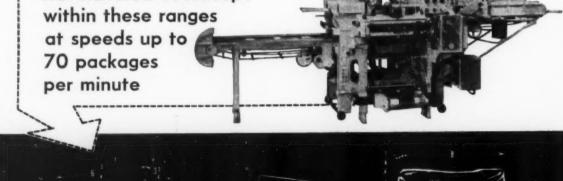


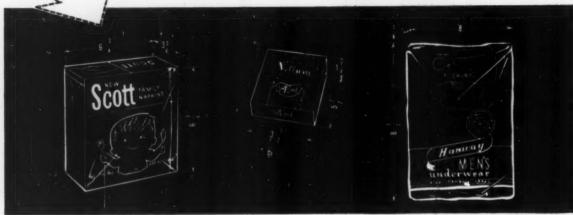




This Battle Creek Packaging Machine Model 47S

has handled overwraps within these ranges at speeds up to 70 packages





to produce packages like these



Scott Family Napkins Packaged for Impulse



Gages Vellum Stationery is Carefully Handled by the "Continuous Flow" Process



Colorful, Protected Package of Hanways Men's Underwear

SPECIFICATIONS

Model 475-Versatile, low-cost packaging can be yours with this most flexible of Battle Creek "Continuous Flow" machines. The Model 475 attractively underwraps paper napkins, a variety of textile packages, envelopes, flat stationery and odd shaped paper specialties including combinations of envelopes and flat stationery in unit packages. The smooth "Continuous Flow" process eliminates distortion and creates a neat, tight wrap on every product . . . assuring maximum impulse sales and fast product turnover. Handles self-sealing cellophane, wax-coated paper and laminated foil in economical roll form within package size lengths of 4" to 12", widths of 234" to 8" and heights of 1/2" to 41/2". Speeds range

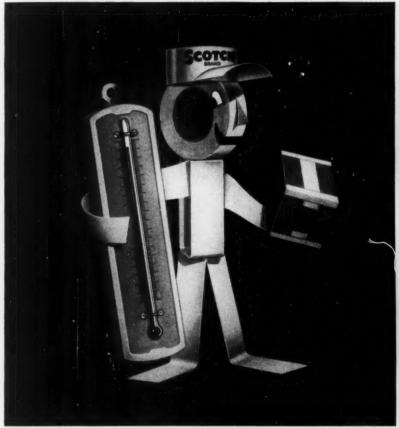
from 40 to 70 packages per minute, and conversion time averages out to 10 or 15 minutes.

Call on Battle Creek Packaging Machines today for quick, complete service on all your packaging problems.

"Continuous Flow" Fackaging

BATTLE CREEK packaging machines, inc.

102 TWELFTH STREET, BATTLE CREEK, MICHIGAN



On all kinds of shipping cartons...

Stick-at-a-touch tape holds in any weather!

No wetting. No rubbing. No re-sealing problems. "Scotch" Brand Carton Sealing Tape No. 260 sticks at a touch. Just lay it in place and press. Designed specifically for all-weather performance, it's unaffected by dampness or temperature extremes.

Takes roughest handling, too. When dry, this tape stands up under 50% more handling abuse than tapes of conventional construction—takes 400% more punishment when wet!

Ask your "Scotch" Brand tape distributor for a free demonstration. See how *other* packers cut costs and increase efficiency the "Scotch" Brand way.

CARTON SEALING TAPE...one of over 300 Pressure-Sensitive Tapes, trademarked...



SCOTCH BRAND

The term "Scotch" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul S, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, Lotidon, Ontario.

Look what you can do with it!



SEAL CARTONS inexpensively without mess or failure. "SCOTCH" Brand Carton Sealing Tape No. 260 sticks at a touch. Stays put. Meets government packaging Spec. PPP-T-76.



SEAL CONTAINERS of any size or shape. Thin and flexible tape has good tensile and tear strength in both directions; good adhesion and wet grab. Makes firm bond with no "creep."



NO FUSS, no muss. This inexpensive pressure-sensitive tape is ready to use any time, anywhere. No moistening required. No clean-up chores or daily care of dispensing equipment.



FREE FOLDER gives you all the facts on "SCOTCH" Brand Carton Sealing Tape and dispensers. Address Dept. EA-97, Minnesota Mining and Manufacturing Co., Saint Paul 6, Minn.





SLASH FREIGHT COSTS OF YOUR FINISHED PRODUCT

Ship your product concentrates to William Bishop's west coast packaging plant for expansion into the finished product. Reduce freight costs and time lags to a minimum!

Your product is packaged and warehoused, all according to specifications, and delivered to the western markets you wish to reach—including Los Angeles County, where 25% of western states' retail sales are made.

Your packaging costs at Bishop's are greatly minimized because they are shared by other manufacturers... resulting in economical volume operation.

Bishop's fast, modern equipment and thoroughly experienced assemblers deliver on firm schedule.

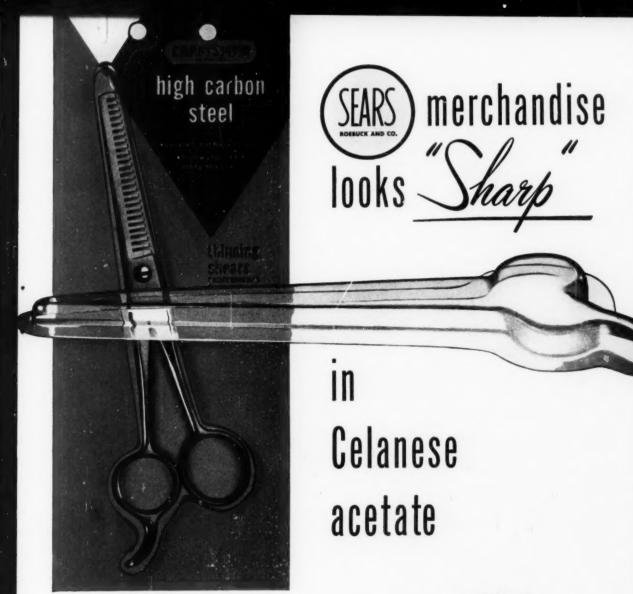
Westerners stampede to get good National Brands.
Be sure your brand is represented out west.

Reach this rich market efficiently and economically with the help of the William Bishop Company.

WILLIAM BISHOP COMPANY

23 YEARS OF PACKAGING AND PRODUCTION ASSEMBLY FOR NATIONAL MANUFACTURERS OF INDUSTRIAL, FOOD, AND COSMETIC PRODUCTS

TUBE * GLASS * PLASTIC * FOIL * ALL TYPES OF PACKAGING



- These vacuum-formed packages once again illustrate why Sears Roebuck is considered a top merchandiser.
- They also illustrate the top packaging job Celanese acetate can do.
- Acetates' sparkling transparency lets Sears merchandise speak for itself. Its sales appeal adds important impact at the point of sale and helps

moves Sears' merchandise faster.

- Because of this, Sears and Celanese acetate are old friends. Together, they make the finest and most effective packaging displayed on store counters throughout the country.
- Celanese acetate can do the same for you. Write Celanese for complete information. Celanese®



Celanese Corporation of America, Plastics Division, Dept. 108-5, 744 Broad St., Newark 2, N. J.

Canadian Affiliate: Canadian Chemical Co., Limited, Montreal, Toronto, Vancouver.

Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.

Packages for Sears Roebuck by Shaw-Randall Company, Inc., Pawtucket, R. I.



CUSTOM MADE

FISHER'S

ALUMINIUM

FOILS

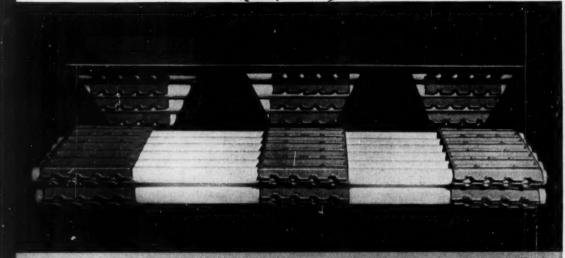
FOR PERFECT PACKAGING



FISHER'S FOILS LIMITED, EXHIBITION GROUNDS, WEMBLEY MIDDLESEX, ENGLAND
Tel Wembley 6011 Cables and Grams Liafnit, Wembley (A B C Cade 6th Edition).

BEDS for BULBS





custom-fitted protection cradles fluorescent light tubes

If you have a delicate packaging problem, be wise—call Keyes!



A wide variety of fragile products—foods, glassware, electrical parts and many others—are now packed more efficiently with Keyes molded pulp shapes. In addition to eliminating losses from damage in transit, packers usually find that molded pulp actually costs less than ordinary packing materials and saves valuable storage and shipping space. Take advantage of these savings. Years of experience in the field of molded pulp, coupled with modern plants and manufacturing skills, are available at Keyes to design and produce better packaging for you.

MAKERS OF FAMOUS ROYAL CHI-NET® MOLDED PAPER PLATES

Product Development Division, Dept. MP

KEYES FIBRE COMPANY

WATERVILLE, MAINE

Announcing a Revolution, because...

this package is

100% water soluble!

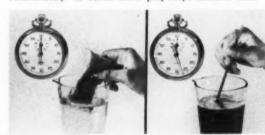
Hundreds of products will benefit from the quantity-control and easy dispensing now possible through practical, economical water soluble packaging. This longtime object of researchers' efforts is available now . . . in Mono-Sol's new, internally plasticized polyvinyl alcohol film which is stable at all humidities.

Packages made with this unique film dissolve readily in 72° F or warmer water with mild agitation, releasing their entire contents into the liquid without any mess or flying dust. In addition to being water soluble, Mono-Sol's PVA film is highly oil and solvent resistant, and impermeable to oxygen and other gases. It can be handled on most standard package filling and sealing machines with slight agitation.

Imagine the convenience which can be added to your product by converting to water soluble packaging in Mono-Sol's PVA film! And think of the tremendous merchandising and promotional opportunities it opens! Without charge, Mono-Sol will provide a laboratory evaluation of your product's suitability for PVA water soluble packaging.

- soans
- insecticides
- sodium bicarbonate
- medicinals
- sodium hyposulphite
- detergents
- naphthalene
- dves
- trisodium phosphate

... are just a few substances which can be packaged successfully in Mono-Sol's polyvinyl alcohol film.



In water 120° F, a 1.5 mil PVA package of a well-known washing product dissolves completely in 27 seconds with mild agitation. In 70° F water, complete dissolution of the package took 80 seconds.



Write for your free copy of the new Mono-Sol bulletin, and get the full story.



A leading dyestuffs producer, Monroe Chemical Co., Quincy, III., now packages its entire line of Putnam Fadeless Dyes for home use in water-soluble polyvinyl alcohol film made by Mono-Sol. Consumer acceptance of this revolutionary package is sensational.

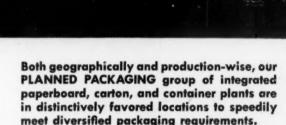
MONO-SOL CORPORATION



407 COUNTY LANE ROAD

CENTERED

IN THE
INDUSTRIAL
HEART OF
AMERICA

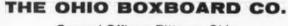


LABORATORIES with ultra-modern scientific apparatus and skilled research men solve specialized problems of product protection and safe transit.

STYLING for eye appeal and brand identification is in the hands of merchandising-minded artists and package technicians.

PACKAGE LINE ENGINEERING coordinates package design and production with machine development.

Consultation with a member of our field staff places this coordination of complete PLANNED PACKAGING facilities at your service.



General Offices: Rittman, Ohio



PLANNED PACKAGING
MOVES MERCHANDISE

The Ohio Boxboard Company

OHIO

Empire Box Corporation

The General Carton Company Cleveland, Ohio

The Norwelk Paper Box Company

The Ohio Baxilleard Co., Inc. Pittsburgh, Pa Western Containers, Inc.

Fairbanks Containers, Inc.

Champion Containers, Inc.

The Ohio Boxboard Company

The Ohio Boxboard Company
Youngstown, Ohio



STRENGTH

in packaging is important, too!

"Record dust covers get hard use. In the store. By consumers. Because VISQUEEN film makes stronger packages, the merchandise is re-sold each time the package is used. Such creative packaging by Wrapture moves goods, keeps record buyers happy."

Mort L. Nasatir Director, Advertising and Merchandising, Decca Records, Inc.



VISQUEEN film's superior strength eliminates breakage. Resists impact, puncture. Won't crack, split, shatter or run. Production advantages result: better machinability; less down-time; higher speeds.

VISQUEEN film's greater strength gives greater tear resistance; higher tensile strength; consistent elongation.

Superior strength is only one reason VISQUEEN film is strongly preferred by leading packagers. Others: VISQUEEN film is more uniform; stiffness and body make fabrication easier; treated film prevents ink rub-off; longer experience and greater research facilities of VISKING technicians assures better quality—and quality cuts packaging costs.

Write us or use information request tag for detailed information.

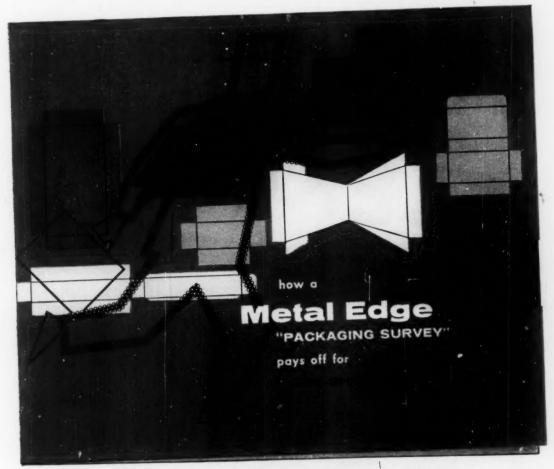
VISQUEEN film is all polyethylene, but not all polyethylene film is VISQUEEN. Only VISQUEEN film has the benefit of research and resources of VISKING COMPANY.

PLASTICS DIVISION
VISKING COMPANY Division of
P.O. Box 1410 Terre Haute, Indiana
In Canada: VISKING LIMITED,
Lindsay, Ontario.



Corporation

A PACKAGING case history for management men!



It shows how METAL EDGE solved these problems for York-Shipley:

- Cut Inventory Time 30%!
- Added Sales Appeal!
- Increased Product Protection!
- · Saved Handling Time!
- Improved Product Identification!

METAL EDGE BOX

Barrington, New Jersey

Packaging, Materials Handling, Inventory Control Engineered to Specific User Needs For the Leaders in over 100 Industries.

SEND FOR IT, IT'S FREE!

National Metal Edge Box Co.
Box # 60, Barrington, N. J.
Gentlemen:
Please rush me your "York-Shipley Case History". I understand there is no cost or obligation.
Name
Position
Company
Address
City
Zone
State

FLEXOTUF

For new high gloss at new high press speeds on:

MYLAR TREATED POLYETHYLENE

SARAN COATED CELLOPHANES

TREATED ALUMINUM FOIL

MOST GRADES OF MOISTURE PROOF CELLOPHANES

ACETATE

POLYSTYRENE

New higher press speeds • Extra high gloss Excellent printability • High block resistance Superior moisture resistance • Resists foaming

Over 2 full years of commercial testing have gone into the proving of remarkably versatile Flexotuf. These new inks combine features never before present in the ordinary run of Flexo inks. They offer almost unbelievable block and moisture resistance, as well as exceptional gloss; rich colors never before possible give a new dimension to "eye appeal." Many of our customers report that with these new inks they turned out the finest jobs ever produced in their plants. What's more, Flexotuf replaces the several inks previously needed for this type of package printing, hence, tie up less money in inventories. See for yourself why Flexotuf is revolutionary! Call IPI now!

IPI, IC and Flexotuf are trademarks of Interchemical Corporation

INTERCHEMICAL PRINTING INK

CORPORATION

DIVISION

EXECUTIVE OFFICES: 67 W. 44th ST., NEW YORK 36, N. Y.



Save on labels

-with Tickometer imprinting!

With a Tickometer you can imprint labels as you need them
—weights, sizes, grades, colors, quantities, dates, codes, etc.

Print no more than you need for immediate use, reduce
inventories and printing costs, save storage space
and records, and avoid label waste!

- The Tickometer is a precision imprinter, with speeds up to 1,000 pieces a minute! It has an impression surface of 2-3/16 by 3/8 inches, registers closely, handles sizes as small as 1 by 2 inches, to as large as 15 by 15 inches (depending on model). Prints on most weights and finishes of paper, and on light card stock.
- Feeds and stacks automatically, can be used without special skill or training. Also counts—can make a predetermined count, register part or full totals, with optional consecutive numbering. It's so accurate, banks use it to count currency!
- The Tickometer also earns its keep in a lot of other ways...can stamp, mark, cancel, sign, date coupons, cards, checks, sales and production slips, tickets, tags, etc.—is a valuable time saver in any plant or office. You can buy it or rent it. Requires minimum maintenance. Pitney-Bowes service from 302 points.

Call the nearest Pitney-Bowes office for a demonstration. Or send coupon for free illustrated booklet and case studies.



Pitney-Bowes

TICKOMETER

Counting & Imprinting Machine

Made by the originator of the postage meter . . . branch offices in 103 cities in U.S. and Canada

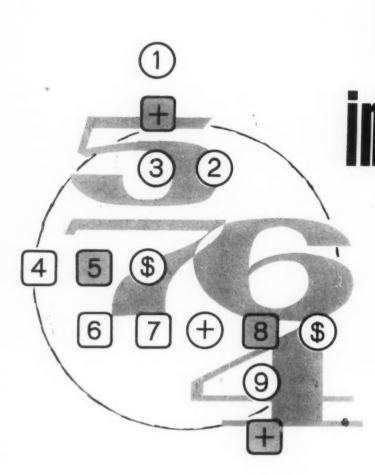
PITNEY-BOWES, INC. 4833 Walnut Street, Stamford, Conn.



☐ Send free Tickometer booklet & case studies

Name_____

Address



ink mileage adds up to real economy!

You get more for your money when you use a premium quality S&V ink! For the uniformity and maximum reliability of every pound of S&V ink give you top press performance with more impressions per pound on every job you run. The built-in bonus of a reduced cost per impression is your assurance of real economy. For a guarantee of top quality, optimum performance and built-in economy, be sure to specify S&V inks.

You can't buy better mileage!

Sinclair and Valentine Co.

MAIN OFFICE: 611 WEST 129TH STREET, NEW YORK 27, N. Y.

STRATEGIC SERVICE PROVIDED BY OVER 45 PLANTS

MODERN PACKAGING

September 1957

Swing to food stores for toiletries is confirmed by the latest *Consolidated Consumer Analysis*, compiled from surveys by 23 newspapers of the buying habits of 5.000,000 families in their areas. It shows that 67.6% of the families now buy at least some of their toilet goods in grocery stores, as against a figure of 63.9% last year and 57.2% in 1955. In some areas, the figure now is over 80%.

Wall Street sees recent price increases of metal and glass container companies, attributed to rising wage and materials costs, as improving profit levels in these industries. Total 1957 shipments of metal and glass containers are projected only slightly higher than 1956, but dollar sales are expected to show good gains because of the price advances, says the Value Line Investment Survey. The glass companies particularly are profiting from their price increases, the report says, and wider profit margins are in sight for all of the glass container companies and for two of the four largest can companies.

Note the position of Continental Can Co. as a leading factor in eight different areas of packaging supply, following a 15-year program of mergers. While holding its position as the second largest producer of metal containers, Concan has become the third largest in glass containers (through its acquisition of Hazel-Atlas) and, following its merger with Robert Gair, second in folding board and non-bending board, fifth in container board and third in kraft paper bags. In addition, through its Shellmar-Betner division, Concan is a leading film converter; through its acquisition of Mills, a major factor in the plastic bottle field, and through White Cap, one of the largest producers of metal closures. Altogether, Continental Can is now the largest manufacturing concern devoted to packaging supply.

Now comes news that Continental Can, turning to vertical integration, plans construction of a bleached kraft pulp and paper mill to supply its paperboard-package-making divisions. This would indicate that Continental hopes to go more heavily into ice-cream and dairy cartons, as well as crushproof cigarette boxes. Options already have been obtained on a number of mill sites.

Once again, over-expansion fears of the paperboard industry are proving unfounded. Paperboard production during the first half of 1957 was up 5% over the last half of 1956; folding boxboard alone was up 9.7%. In the last week of July, paperboard production was at a rate close to the best of the year, unfilled order backlogs were the highest in several months and observers were predicting a new upward surge in production.

Premium promoters, at their meeting in New York this month, will be told that the total business in premiums and sales incentives now amounts to \$2 billion a year. About 800 manufacturers of these items will be represented in the New York Premium Show. Trading stamps alone are credited with one-third of the volume. Premium practices are reported spreading to produce packers and oil companies.

Users question the recent 4½% increase in the price of primary aluminum, following a similar price rise in steel. The two industries both gave as their reason similar wage concessions to the United Steel Workers. But it is pointed out that the labor quotient is considerably higher for manufacturing steel than aluminum. Many ex- [Continued on page 38]

Background

for

packaging

Notes.

quotes

and comments

pected aluminum to hold the price line, even if pinched, and take advantage of the opportunity to move in on steel in the can field, where the price differential is almost the sole remaining deterrent. *Note:* Collapsible-tube manufacturers may be forced competitively to absorb the increase, since one of their number—Victor Metal Products Corp.—has announced that it will do so.

'Today's packages often talk too much. Talky packages are usually designed to sell the boss instead of the customer. A package is a salesman. But unlike the human salesman, a package cannot appeal to the ear or the intellect, but only to the eye. When you sell to the eye, design and color are your most effective sales tools. Words perform a secondary function. The ultimate responsibility for package effectiveness rests with the packaging executive. Base your decisions on what will sell your customers rather than your boss—and your package will be the best sales tool." Albert Kner, in Advertising Age.

Important progress toward standardization of flexible packaging materials is the formation of a steering committee within the American Society for Testing Materials to organize a permanent committee for the development of definitions, specifications and test methods. The move is strongly supported by the Packaging Institute and the National Flexible Packaging Assn. Standards to be promulgated would cover basic materials, combined or composite materials, and end-use applications. The work probably will be correlated with that of the National Bureau of Standards, which is expected to issue a quality standard for polyethylene film before the end of the year.

Final figures show that the flexible packaging industry made impressive gains in 1956, with a sales increase of 16.2% over 1955, compared with over-all growth in packaging in the same period of only about 5%. However, according to the National Flexible Packaging Assn., net profit of 43 converter members increased only 1.23% over 1955.

'Wholesome balance' between national and private brands is advocated by Harry McHugh, general manager of Topco Associates, a cooperative purchasing agency for 27 supermarket chains. McHugh reports that Topco members' private-label sales, comprising some 600 items purchased, packaged and distributed by the association, average about 10% of gross sales—a five-fold increase in five years, which he attributes to rigid quality control and improved packaging. But Topco has no intention of excluding national brands.

New world of color is reflected in ink-makers' sales. A few years back, black accounted for 90% of ink production; now many companies find the situation just reversed, with 90% of their sales being colored inks. The big reason is the trend to color in packaging, for the packaging field has now replaced publishing as the biggest consumer of ink. Packaging, says Chemical Week, now provides 45% of the ink sales dollar, magazines 25%, commercial printing 20% and news ink 10%.

An example of what can be accomplished when packaging interests work together is the success of the Paraffined Carton Research Council's three-year campaign against state and city rules requiring individual plant addresses on ice-cream packages. A majority of state and municipal health departments have now conceded that a code mark to identify the plant, embossed on the carton by a simple attachment on the filling machine, is sufficient. Thus, multi-branch ice-cream manufacturers can order standard cartons more economically in larger quantities, can shift carton supplies between plants and can have clean, uncluttered labels.

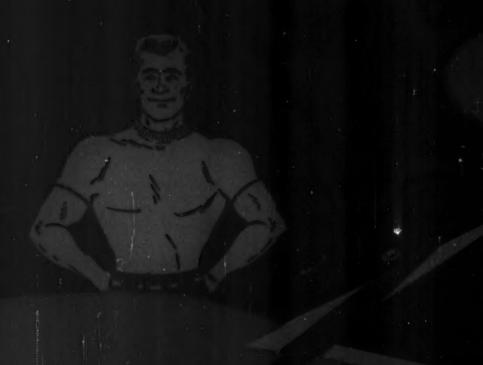
Background

for

packaging

[Continued from page 37]





DEED T

The printed cellophane envelope for Stedman is another profit-making package by Package Products Company.



tas temperate Torse Tashiri to fit the tadividual, to fit the tadividual, to fit the tadividual, to fit the tadividual, to fit the tadividual communicates in that til individual communicates or supply.

Our tailored passes for materials include tools for traps, bags, sheet, and printed roll stock.

Pathous Products Courffigurious, A. Carones in the course to the course of the c



Package Products

DESIGNERS, PRINTERS AND FILM CONVERTERS FOR PACKAGING

How Packaging Manufacturers profit by an lowa location

Now available, a detailed study of your particular organization's "economic fit" in lowa as developed in the recent study conducted by FANTUS AREA RESEARCH, INC.*

Fantus was commissioned by the State of Iowa to pinpoint those industries with particular suitability to an Iowa location. And to provide specific information for those industrial executives considering new plant locations now or in the future.

Fantus made a realistic, detailed survey of the state as viewed through the eyes of an industrialist. It took ten months to complete, cost many thousands of dollars. Iowa now knows who her best prospects are, and those potential industries have available specific, accurate information to assist in evaluating their profit possibilities in Iowa.

PACKAGING INDUSTRY RECOMMENDED BY FANTUS

The Packaging Industry, specifically manufacturers of converted paper and paperboard products, foil and plastic film items and collapsible tubes, were found by Fantus to have outstanding profit potentials with an Iowa location. Fantus recommended these industries on a detailed evaluation of such factors as: proximity to markets, their present and potential value, proximity to raw materials, basic and parts supplies; quality, aptitude and supply of labor; wage rates; transportation and utilities; tax structures, and government attitudes.

SIGNIFICANT ADVANTAGES FOR PACKAGING PRODUCERS IN IOWA

Pulp, Paperboard, Foil, Cellophane and Plastic Materials

Consumption greater than production

Purchases by Iowa users of shipping containers, moided pulp goods, foil and cellophane items, tapes and related materials outstrip production in the state by a substantial margin. For example, production of paper and allied products in Iowa, expressed as a percent of U.S. total is 0.3. While consumption of paper and paperboard products is 1.6% of U.S. total. Consumption of these same supplies in the adjoining states of Nebraska, Minnesota and South Dakota also exceed production capacity.

\$130 million market

This same four-state market area encompasses a packaging sales territory conservatively estimated at \$130 million.

Market for packaging materials

									lows	N	eb.	Mi	nn.	5.0	ok.	Te	late
Food	1	n	d	U	8	tr	ie	98	\$14	\$	7	\$	12	\$	3	\$	36
Other									23	-	28		17		17		93
Total									37		35		20		20		129

By locating regional facilities in Iowa, manufacturers of containers and packaging products will pre-empt solid blocks of this \$130 million market.

Diversified consumers

The territory is well diversified with customers having strong growth potential. Indicative of the potential is the food industry. This industry accounts for nearly 28% of the four-state purchases of packaging products as against a national average of 23%. Major appliances and machinery parts are other important pack-

aging goods consumers showing excellent growth potential in and around Iowa.

Primary supplies more than adequate

Capacity increases in these supplies are more than adequate to sustain new packaging operations of substantial size. Particularly significant are sources of an additional 16,000 tons of aluminum foil, 10 million pounds of cellophane; polyethylene film; .009 corrugated board, container chipboard, pulp, starch, microcrystalline waxes and adhesives — all located in Iowa or within economical distances.

Competitive wage situation

Iowa has a distinct wage advantage.

STATE																	Gross Averag Hourly Earnin March, 1957								q	
Michigan													×		×			ĸ		\$	1	2.	4	1		
Ohio																						2.	2	9		
Indiana																										
Illinois												*										2.	1	8		
Wisconsin																					. :	2.	1	1		
Minnesota																						2.	0	9		
lows																						2.	0	5		

A surplus of high caliber labor

In contrast with many of the nation's manufacturing areas and most of the Midwest's industrial centers, Iowa has a surplus of labor. If job opportunities were available, Fantus estimates that 66,000 people could be encouraged to enter Iowa's labor force.

This chart also indicates the potential.

								•			1	tage of Employed Persons in Instacturing, 1950
												. 40.9
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Manufacturers with plants in other parts of the U.S. as well as Iowa report that Iowa's labor is intelligent and readily trainable in factory technique.

The traditionally excellent educational system in Iowa provides the best support for that statement. And this higher level of education contributes toward stable labor-management relations as well as the high quality of the labor force. During 1955 there were fewer idle man-days in comparison with total working time than the national average.

Collapsible Tubes

lowa source of major raw material

Aluminum foil has now replaced lead as the dominant raw material of the collapsible tube industry. A tube manufacturer in Iowa gains access to a major source for aluminum foil through a large plant in Eastern Iowa.

Collapsible Tube manufacturers close to major central U.S. customers

The heavy Midwest concentration of plants producing medicinal and pharmaceutical products and toothpaste offer a tube manufacturer in Iowa an excellent market. Tinting colors in oil, adhesives and cements, caulking materials and food products packaged in tubes are other growing and important customers.

Improved competitive position

Since tube manufacture is concentrated to a large extent in the eastern section of the country, an Iowa location gives a producer a sharp competitive advantage with respect to Midwestern users. A tube manufacturer establishing a branch plant in Iowa would establish a leading position in an important area which has relatively little tube production at present.

Reduced labor costs

Female production workers in Iowa are available at an average rate of \$1.20 an hour. The comparable rate in a typical eastern city is \$1.50. An Iowa plant employing 150 females would achieve annual payroll savings of \$93,600.

GENERAL ADVANTAGES

lowa offers many other advantages important to new packaging industries

Excellent transportation facilities

Iowa ranks fourth in the nation for total rail mileage, 8,500 miles of track. The 9,000 miles of concrete paved highways in Iowa is surpassed by only two other states. East-west and north-south commercial airlines make daily stops at 13 midely distributed Iowa cities. Iowa's two navigable rivers, the Mississippi on the east, the Missouri on the west provide economical river barge transportation.

Advantageous labor laws, tax structure

Iowa's labor laws are non-restrictive to industry. Unemployment insurance and workmen's compensation statutes are attractive. Only two states impose a lower corporation Income Tax. Real and personal property assessments are based upon 60% of actual value. Property is assessed in the district in which it is located. The Iowa State Government is sound and has a cash surplus in the treasury.

Enthusiastic government

New industry is warmly welcomed in Iowa. The cooperation given potential industry by communities and the state is best exemplified by attendance at Iowa's Annual Industrial Clinic, the largest of its kind. In 1957, 875 people from 131 Iowa communities attended the clinic. Ninetyone Iowa cities have organized Industrial Corporations to assist new industry in establishing and building plants.

A detailed presentation of your company's potential in Iowa will be compiled from the Fantus Study upon request. Write the Iowa Development Commission on your company letterhead, a representative will contact you: or call collect, Director, Iowa Development Commission, ATlantic 2-0231, Des Moines. Your request will be held in confidence.



Address your request to:

IOWA DEVELOPMENT COMMISSION

377 Jewett Building . Des Moines 9, Iowa

THERMOGRI

Masters Your Toughest Adhesive Problems

Thermogrip is a revolutionary new hot melt adhesive that's 100% working solids. It sets instantly on either porous or non-absorbent surfaces.

Thermogrip adhesives in rope-like form can be formulated to precise requirements and are being used with great success on polyethylene films, aluminum foil, wet strength kraft, porous filter stocks and PE coated materials in food packages, bags and specialties.



Better bonds at lower cost. Inside ply of polyethylene coated kraft in this large multiwall bag by Arkell and Smiths is seamed with Thermogrip, saving adhesive cost, giving quicker, stronger bond and providing moisture resistance.



Instant glue set on side seam of 10 pound potato bag prevents side seam slippage—gives Bemis Bros. reduced waste, improved bag quality—permits faster operation.



No wet through. Thermogrip on this porous material saves stock and cuts waste. Adhesive costs were lowered and adhesive handling improved by this easy to use instant set adhesive. These vacuum cleaner bags for Electrolux were produced by Shelmar-Betner Division of Continental Can Co.



Thermogrip adhesives are fed, melted as needed and metered to the work with Thermogrip applicators that can be adapted to many tasks and easily mounted on a wide variety of converting and processing equipment.

These unique adhesives can break present adhesive limitations, help you achieve easier handling, economies and greater speeds. Send today for literature and more information. Please describe product, material to be bonded and equipment you are using. United
SHOE MACHINERY

CORPORATION Industrial Sales Division

140 FEDERAL ST., BOSTON, MASS.
THERMOGRIP manufactured by
B. B. Chemical Co.,
Subsidiary





HESSER PACKAGING MACHINE

was built - since then . . . more than

650

German and foreign

PATENTS

have been granted.

This figure speaks for itself

and most effectively demonstrates the continuous development of **HESSER** designs, based on years of thorough experience in the packaging field. If you have a packaging problem . . . PLEASE CONTACT:

Geveke & Co., Inc. New York Packaging Equipment Willowdale/Ontario James C. Hale & Co. San Francisco Los Angeles

Edward A. Wagner Dallas/Texas Hugo Schoener Mexico City

FR.HESSER

MASCHINENFABRIK-AKTIENGESELLSCHAFT STUTTGART-BAD CANNSTATT founded 1861.



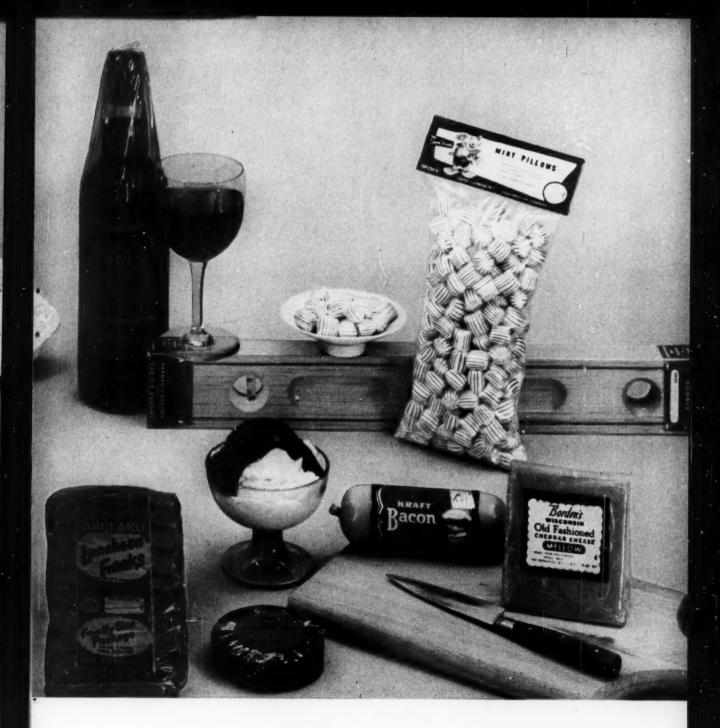
Your packaging showmanship begins at Dow

it pays to package in STYRON

Every product has to *stand* out to *sell* out in today's self-service market. That's why sleek plastic containers made of Styron® are opening shopper's purses for a constantly widening range of fine products . . . from jewelry to gelatin salad.

Opaque, crystal clear or in gem-like colors, Styron can create sales for you, too. This sturdy, lightweight plastic pays dividends in packing, handling and shipping advantages.

Bring your packaging problems to Dow Packaging Service where vast experience can help you to real showmanship.



it pays to package in SARAN WRAP

If it's worth protecting, it's worth Saran Wrap* added protection. Add the complete transparency and unwilting beauty of Saran Wrap and you have the answer to flexible packaging that sells.

The greatest moisture barrier of all transparent films, Saran Wrap won't become brittle with age, won't cloud up, retains its beauty and protection in spite of customer handling.

The success of the Saran Wrap household roll is your cue to add the Saran Wrap name to your packages. Start your packaging off right with a line to THE DOW CHEMICAL COMPANY, Midland, Mich., Packaging Service PS-1515E-1.

*Trademark of The Dow Chemical Company

YOU CAN DEPEND ON



NOW for Quality in high speed, inline **Board Printing**



plastic, glassine, foil, and paper. UNIT STACK DESIGN permits vertical assembly of one, two, or three printing units or color stations in a single piece of equipment, reducing floor space and providing easy accessibility for the pressman. Individual stack drying systems boost operating speed on multi-color work through quick-drying of colors between stations. The web is delivered printed side up for easy register inspection and control. A second unit

stack may be added for additional stations.

4 PRESS SIZES IN 2 PRESS TYPES

The new CHAMPLAIN Flexographic Press is available in two types, in 20", 26", 36", and 44" sizes with a plate cylinder circumference range of 12" to 36"

REPEAT INCREMENT press provides printing increment repeats of .157", .250", .314", or larger within the circumferential range. Its exclusive "swing-out" design of fountain and plate cylinder section simplifies color or plate changes, saves time, and increases production. With more than one stack in use, other units continue to run while "down" units are prepared, ready for immediate use on the next run.

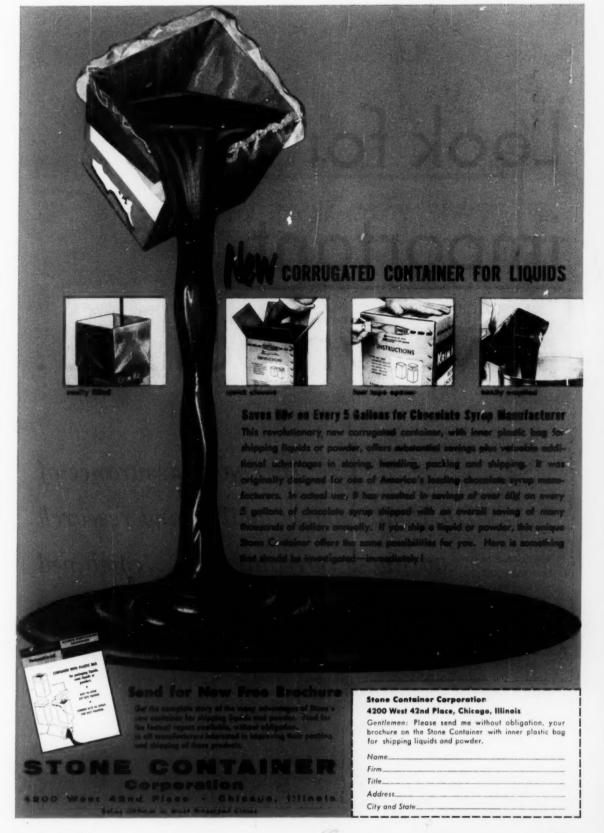
ALL-SIZE press particularly fits box board or label printing operations where repeat size length varies because of glue-flap interlocks, folds, or filling machine specifications. Any size repeat cylinder can be run within the 12" to 36" circumference range without step increments. The plate cylinder is driven directly from the main press drive, eliminating change gears. It saves stock, too.

Write for your copy of descriptive bulletin on the new CHAMPLAIN FLEXOGRAPHIC PRESS. Champlain Company, Inc., 88 Llewellyn Ave., Bloomfield, N. J. Chicago Office: 520 N. Michigan Ave., Chicago 11, Ill. In Europe: Bobst-Champlain, Prilly-Lausanne, Switzerland.



gravure, flexography, rotary letterpress and allied equipment for packaging and specialty printing.

A 2011



Look for this important new symbol

It is your assurance of
Du Pont product quality and research
advances in cellophane...combined
with the superior craftsmanship and
design experience of leading converters

authorized converter UPONT cellophane

Now, you can be sure! You can be sure of the finest-quality cellophane plus expert package design and highest quality in all phases of converting when you follow these two easy steps:

1. ORDER FROM AUTHORIZED CONVERTERS OF DU PONT CELLOPHANE. Du Pont makes a complete line of cellophane films especially designed to meet specific packaging needs. These films in converted form are available only from Authorized Converters of Du Pont cellophane. You'll be seeing this emblem in their advertising . . . on letterheads, invoices and cartons.

2. SPECIFY DU PONT CELLOPHANE BY DU PONT CODE DESIGNATIONS. Here are a few of the designations for the most widely used types:

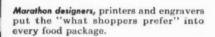
PD LSD MSD K-202 MD LSAD MSAD K-203

By using Du Pont code designations and dealing with Authorized Converters you can be assured of getting consistently high-quality film converted to your particular needs.

Your Du Pont Representative and Authorized Converter Representative will be glad to help you in your choice of more than 100 different cellophane films made exclusively by Du Pont. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.



BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY





the Man from Marathon Knows which food packages catch her eye

Why does she pick up certain food packages, pass up others? The Man from Marathon who calls on you has the answer.

He has interviewed thousands of shoppers in food stores all over the country... tape-recorded their "reasons why" right after they buy. In addition, Marathon candid cameras "catch 'em in the act" of picking out the preferred package.

The result of Marathon's point-ofpurchase merchandising research? Packages that sell more BAKED FOODS, FROZEN FOODS, DAIRY PRODUCTS and MEATS.

Why not interview the Man from Marathon, let him tell you what he knows about shopper buying habits? Or write: Marathon Corporation, Dept. 202, Menasha, Wisconsin. In Canada: Marathon Packages Limited, Toronto.

MARATHON MPACKAGES

SELL BRANDS . PROTECT PRODUCTS . SPEED PRODUCTION

MODERN with MUL-T-BRITE ...the modern flexographic ink

The ink to use for

HIGHER GLOSS

Dries to a glossy finish...
matches the lustre of slick

STRONGER COLOR

Has greater color strength per pound than conventional inks

MORE MILEAGE

Covers up to 30% more area per pound than other inks

FREEDOM from BLOCKING*

Doesn't block—ink-to-ink or ink-to-stock—at temperatures to 150° F., 85% relative hamidite.

WATER RESISTANCE

Withstands wet refrigeration and other severe moisture conditions—eliminates need for varnish overprinting

FASTER SPEED

Works beautifully on highspeed presses running at up to 500 form

Multi-Purpose VERSATILITY

Prints on all popular flexible packaging materials—can be modified for use on slow-speed equipment—is suitable for rotogravure as well as flexographic processes



The modern multi-purpose flexographic ink



Bensing Bros. and Deeney

Flexographic Ink Specialists

A Subsidiary of Sun Chemical Corporation

Made to meet today's demands for finer printing quality, better end-use performance, and improved production efficiency—that's new BBD MUL-T-BRITE INK. A modern ink, based on an advanced solvent-resin system, MUL-T-BRITE is the modern converter's key to top-quality, trouble-free, high-speed printing on polyethylene..."Mylar"...plain, moistureproof and Saran-coated cellophanes...aluminum foil...and glassine. Why not arrange now for a trial run of this great new ink on your own press...and see for yourself the never-before-available advantages it offers. Contact your nearest BBD or Sun Chemical office (all principal cities) or Bensing Bros. and Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.

• Fact-filled "700 Series" Technical Data Bulletin and printed samples free on request



Alkali and Mold Resistant



Resists Grease and Salt



Prevents Dryness



Keep quality under control with Cochran Foil



Non-Crazing



Moisture Repellent

To guarantee lasting quality, more and more leading manufacturers are turning to Cochran Controlled Protection. They know that Cochran's twenty years of experience assure them quality foil—proper papers and boards—proper adhesives—the right coatings—to withstand all the conditions of transport and storage.

They know that with Cochran Controlled Protection quality products *remain* quality products throughout their journey to the consumer's hands.

Find out today what Cochran Controlled Protection can mean to your products.

Write for booklet "MEET COCHRAN FOIL," Dept. F-9, 1430 South 13th Street, Louisville 10, Ky.



Heat Resistant



Chemical Resistant

Cochran FOIL COMPANY

PLAIN, LAMINATED, COLORED AND COATED FOIL FOR PACKAGING AND INDUSTRIAL APPLICATIONS . COILED ALUMINUM SHEET

FACILITIES AS FLEXIBLE AS FOIL ITSELF

qlass
containers
move
more
food!



Use Anchorglass containers sealed with Anchor caps



... because they are more convenient

YOU'LL MAKE the serving of your food products more convenient by packing them in glass. Lightweight glass containers are convenient to handle, easy and quick to open, easy to reseal repeatedly. Foods can be appetizingly served right from the glass container and it's never necessary to transfer leftovers for safekeeping. Then, too, the transparency of glass simplifies shopping, affords a quick visual inventory—shows when it's time to reorder. Pack in glass... in Anchorglass containers sealed with dependable Anchor caps.



DISTANCE TO VIRTUALLY
ALL MID-WEST, EAST AND
SOUTH LOCATIONS FROM
KAISER ALUMINUM'S
NEW FOIL ROLLING
MILL AT RAVENSWOOD,
WEST VIRGINIA.

NOW. YOUR ALUMINUM

FOIL SUPPLY IS WITHIN

48 HOURS SHIPPING

NOW... FOIL FROM

Aluminum foil for flexible packaging, lithographed labels, advertising materials and many other applications is now being produced at Ravenswood for fast delivery to virtually all mid-West, East and South locations. (See map.)

New 60-inch 4-high mills are rolling foil in widths up to 54½ inches, in gauges under .006 to and including .00025. Additional rolling equipment to handle widths up to 66 inches will be installed in 1958.

With this new Ravenswood plant location to supplement existing foil facilities at Permanente, California, Kaiser Aluminum now serves aluminum foil users with increased flexibility.

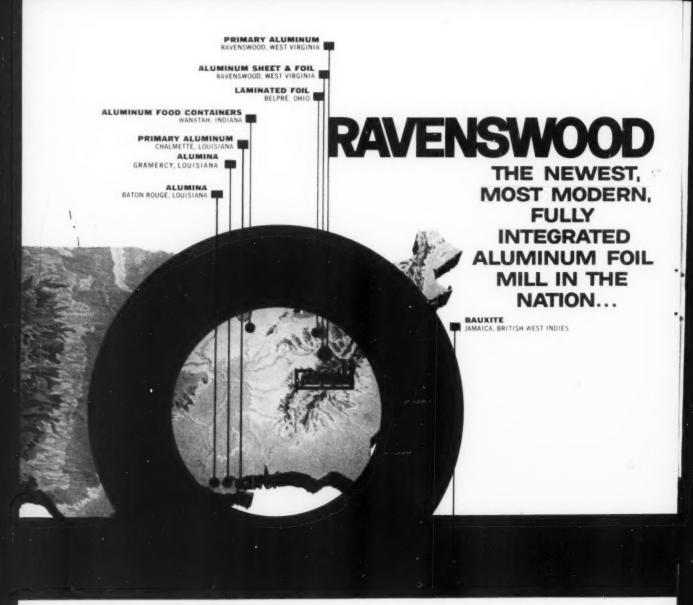
Kaiser Aluminum will be pleased to supply you the names of converters who are eager to work with you on problems in printed flexible packaging. Contact the Kaiser Aluminum Sales Office listed in your Telephone Directory.

Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Bldg., Chicago 11, Ill.; Executive Office, Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

THE BRIGHT STAR OF METALS





Now from Ravenswood, Kaiser Aluminum offers you aluminum foil from the nation's newest, most modern, fully integrated aluminum foil mill... from reduction facilities to rolling mills.

At Ravenswood, the latest features for quality control, mechanized handling and decreased maintenance have been incorporated in the mills and related equipment. These include X-ray gauge control, automatically controlled electric tension devices, automatic temperature-uniformity controls.

As shown on the map, Kaiser Aluminum is a fully integrated producer, providing an assured source of supply...quality controlled from the bauxite mines in Jamaica to the alumina plants in Louisiana to the completely integrated Ravenswood works.

By serving the growing demand for aluminum foil with extensive, up-to-date facilities in the heart of the nation's foil-consuming markets, Kaiser Aluminum assures manufacturers of ample supply on short lead time.

For complete information on availabilities, and on Ravenswood facilities, contact the Kaiser Aluminum sales office listed in your telephone directory.

Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Bldg., Chicago 11, Ill; Executive Office, Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

THE BRIGHT STAR OF METALS





Container Preference

Customers often buy a tested product again and again on the strength of a container that is convenient to use—that won't break if dropped accidentally—that protects product quality to the end—that adds a sparkle of beauty wherever it is kept.

It makes sales-sense to use this kind of container for your product . . . easy to do with lithographed metal containers designed, engineered and fabricated by J. L. Clark. Ask to see samples from our current production; a Clark container specialist will show you the features that shoppers prefer, features that stimulate repeat sales.



Write for Booklet

An important message to business men with a packaged product. Read—"Does your container have a high I.Q.?" Write, we'll send a copy to you promptly. J. L. Clark Manufacturing Co., Rockford, Illinois; Liberty Division Plant and Sales, Lancaster, Pa.; New York Sales Office, Chrysler Bldg., New York 17.























Leading brands of

canned goods

are protected by Mead container board

First-class products must arrive at their destination in first-class condition. Leading packers of quality food products make sure of this by specifying shipping containers made of top-notch container board such as that manufactured by The Mead Corporation.

In its 111 years, Mead has grown into one of the largest producers of container board in the country. With its vast timberlands, its seven large board mills in Tennessee, Virginia, North Carolina and Georgia, and its elaborate research facilities, Mead today supplies virgin kraft liners and Chestnut semi-chem corrugating medium for a good share of the millions of shipping containers used in America each year.

Food, appliances, household items, packaged goods, metal parts: these are just a few of the products protected by Mead container board.

THE MEAD CORPORATION Sales Offices: Mead Board Sales, Inc.





STRONG,

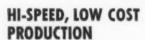
sift-tight

HEAT & GLUE SEAL

with

NON-BLOCKING

BOTTOM



- Quick change-over for short runs
- Inexpensive change-over parts
- Low initial investment
- Simple to operate with minimum training time
- Production up to 120,000 bags per shift
- Simple rugged design with low maintenance

VERSATILE, PROVEN PERFORMANCE

The Simplex "300" delivers 175 to 300 quality bags per minute. Will produce flat or gusset bags — single or double wall with infinite adjustment of bag lengths from 4" to 18", and from 2" to 12" in width. Send for sample of Simplex "300" sift-tight bag today for your own inspection.

for details on Simplex equipment write to

FMC PACKAGING MACHINERY DIVISION

Foreign Sales: FMC Export Dept., P. Q. Box 760, San Jose 6, Calif. (Cable Address: FOODMACHIN)

534 - 23rd AVENUE OAKLAND 6, CALIF.

SIMPLEX MODEL "300"

CELLO BAG MACHINE

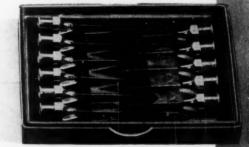
- also handles K-202



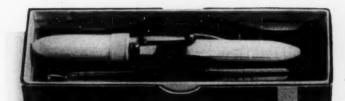
Rowell Boxes



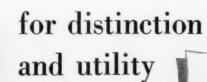
Syringe Box



Needle Box



Thermometer Box





E.N. Rowello. M.

Canisters, round and square set-up boxes for every purpose

Solving Product Problems with Willy Waxheart-



Maybe the pack lacks wax, Max!

Manufacturer:

Well. I've tried everything short of atomic radiation to make these packages work. What's the pitch on wax?

W. W .:

Wax works wonders these days -- thanks to new formulations, new research data. From coatings to cartons, from foods to finishes, you can package it for less with wax.

Manufacturer:

And just where do I go to get the facts on wax?

W. W .:

See the boys at Warwick, the world's largest producer of specialty waxes. They'll be glad to work with you elbow to elbow to find a formulation to meet your problem. And here's a motto to pass along to the boys in the lab:

when wax is the heart of your product...specify Warwick

Warwick Wax offers the broadest selection in the wax field. Samples, suggested formulations and technical service are available to you without obligation. Prompt delivery in any quantity is assured from stock and service centers in 33 principal cities. If your problem is wax-contact Warwick today!



Warwick Wax Co., Inc.

A SUBSIDIARY OF

Sun Chemical Corporation

10th Street & 44th Avenue, Long Island City 1, N. Y. STillwell 6-1100

Midwest Office: 6556 S. Melvina Ave., Chicago 38, III. LUdlow 5-5700

DIVISIONS OF SUN CHEMICAL CORPORATION

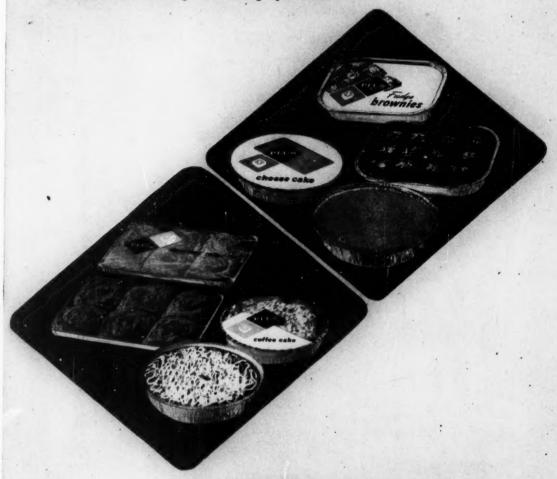
DIVISIONS OF SUN CHEMICAL CORPORATION

MORN (points, mointenance and construction materials, industrial coatings) •

WARWICK (textile and industrial chemicals) • WARWICK WAX (refiners of specialty waxes) • RUTHERFORD (lithographic equipment) • SUN SUPPLY (lithographic supplies) • GENERAL PRINTING INK (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • MORRILL (news inks) • ELECTRO-TECHNICAL PRODUCTS (coatings & plastics) • PIOMENTS DIVISION (pigments for paints, plastics, printing inks of all kinds) • OVERSEAS DIVISION (export) • A. C. HORN COMPANY, LIMITED (Canado) • GENERAL PRINTING INK CORPORATION OF CANADA, LIMITED • FUCHS & LANG de MEXICO, S. A. de C. V,

@ 1957-Sun

almost every bakery product...



has more glittering display value....

greater heat-and-serve consumer convenience...

when it's in a proven-by-sales package by

The Plus Container



EKCO-ALCOA CONTAINERS Inc.

Wheeling, Illinois

EXCO is the registered trademark of Exco Products Company, ALCOA is the registered trademark of Aluminum Company of America.

The corporate name and combination mark; EXCO-ALCOA, is used under license to the manufacturer by each of these companies.

SEE YOU AT THE NATIONAL FROZEN FOOD CONVENTION-BOOTH 177-HOTEL SHERMAN



smash hit!

... simulating the tough treatment your glass-packed product encounters in its obstacle race to market

Zwiff—Bam! And a packed shipping carton meets another rigid test in the Ball Brothers Packaging Research Laboratory.

The drop test shown here measures the ability of packed cartons to withstand repeated free falls from specified heights ... on top, bottom, sides, ends, edges, and corners ... without damaging the glass-packed product within. Ball makes many other laboratory and field tests to be sure that cartons which protect Ball glass containers will withstand "manhandling," machine and transport punishment while delivering your product safely ... economically, too. Ball packaging experts can help you avoid the costly waste of underpacking or overpacking; can help you get more for your packaging dollar. Your packaging should meet product requirements "on the button." It will if it's by Ball.

Call Ball first for glass containers and metal closures to glamorize your product—protect its quality. Whether your requirements call for stock items or private molds, for plain or decorated closures, Ball Packaging Counselors will assist you in developing the package which will best fit your needs. Get in touch with your nearest Ball representative.





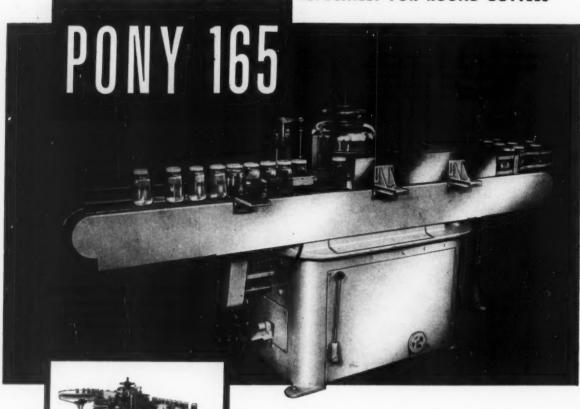
for the finest Glass Containers / Metal Closures / Complete Packaging Counsel

BALL BROTHERS COMPANY, INC., Muncie, Indiana; Okmulgee, Oklahoma, El Monte, California. Represented in major cities throughout the United States.

New! Delivers up to 165 labeled bottles per minute

THE MOST PRACTICAL LABELER EVER DESIGNED

ESPECIALLY FOR ROUND BOTTLES



Conveyor and feed screw set up positive "locked in" spacing for accurate label registration.



Rotating accumulating table may be placed to left or right, can be used as terminal point for case packing. The "Pony 165" gives you speed, precision labeling, lower operating and labor costs... all for less than \$9,000, the lowest price at which a labeler of this calibre has ever been offered.* Suction labeling assures you of top package appearance. No label slippage, no glue seepage, no loss of adhesion, no registration problems.

This money-saving new labeler takes any stable bottle ½" to 3½" in diameter. Maximum label size is 5½" wide by 5½" high; minimum, 1½" wide by ½" high. Built-in variable speed control. Only twenty minutes for a label change, five minutes for a bottle change.

Write for complete descriptive literature.

*Price subject to change without notice.

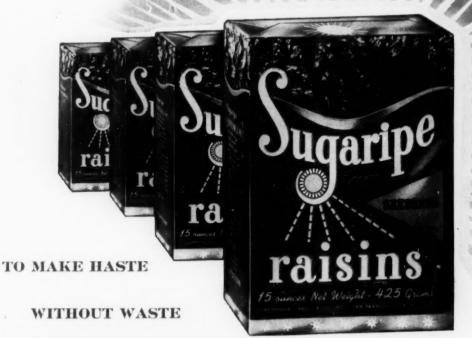
NEW JERSEY MACHINE

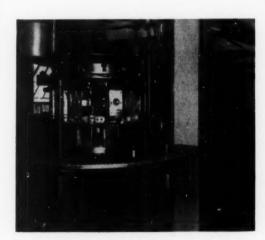
CORPORATION

GENERAL OFFICES AND PLANT: 1500 WILLOW AVENUE, HOBOKEN, N.J. FACTORY SALES AND SERVICE BRANCHES: CHICAGO, CINCINNATI, LOS ANGELES

Makers of the Pony Labelrite . A dependable labeling machine source for more than 38 years.

A SURE WEIGH!





Installation of Pneumatic's Small Velocitron machine in production of Sugaripe raisin packages.

Each and every overweight package that goes out of a plant takes money out of the producer's pocket. Yet it is safe to say that millions of dollars are given away yearly in this fashion. Underweights invite damaging criticism. A great deal of this can be avoided, by better packaging methods.

Shining example in the fruit field is Sugaripe raisins. This product of Rosenberg Bros. & Co. of San Francisco is packed with a high degree of accuracy and uniformity at speeds up to 180 packages per minute. It is packaged on Pneumatic Velocitron equipment which employs net weighing, rather than the less dependable volumetric method.

Velocitron feeds and sets up the cartons, bottom seals and fills them — with fractional ounce accuracy — then top closes them to complete the job. Eight Pneumatron weighing heads measure exact weight of goods by a new "air pressure" principle — an innovation which produces the best net yet. Costly overweights and critical underweights are eliminated!

Advanced design and "lower cost per container" operation are Pneumatic trademarks — good guides to good buying when you're in the market for packaging or bottling equipment.

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Mass. Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delaware & Williams Company, Ltd., Toronto.



Packaging and Bottling Equipment





Polyflex 100 can be CREASED. folded, blanked, slit, sheeted. cut-to-size . . .

BEADED. embossed, riveted. drilled. punched . . .

... easy to fabricate

Standard procedure and equipment will produce a handsome variety of high gloss packages from Polyflex 100. This biaxially oriented styrene sheetcombining film thinness with sheeting rigidity and toughnessis water-clear, translucent or colored. Dimensionally stable over a wide temperature range. Light in weight for higher yield, lower packaging costs. Printable, non-toxic, low in water absorption. For samples and fabricating information, write Monsanto Chemical Company, Plastics Division, Room 3041, Springfield 2, Mass.

Monsanto also supplies polyethylene, styrene, and cellulose acetate for packaging applications.

HEAT SEALED, laminated, cemented. stitched



*POLYFLEX: T.M. REG. U.S. PAT. OFF. PLAX CORP. LICENSED TO MONSANTO CHEMICAL CO.

ANOTHER FAMOUS NAME . . .



LABELS BY

TOMPKINS' Label SERVICE



Since 1928

Inspiring and creating NEW IDEAS in labels—so vital in this dynamic era of packaged goods, automatic labeling and self-service merchandising—for leading concerns from coast to coast.

WE ARE AT YOUR SERVICE

PHILADELPHIA

FRANKFORD AVE. AT ALLEGHENY AVE.

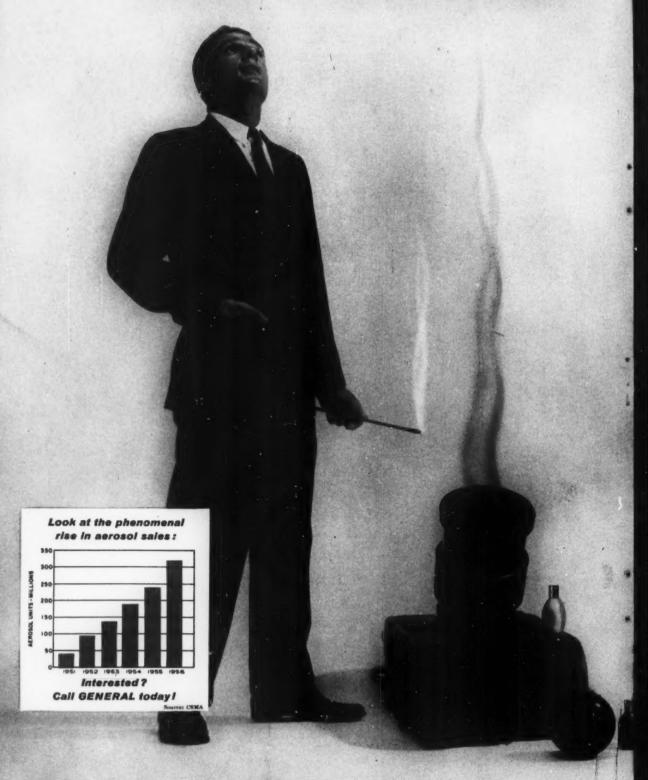
ATLANTA

NEW YORK

BOSTON

CHICAGO

AEROSOL



PACKAGING can start sales shooting straight up for you!

Had your eye on aerosols? Then you've seen sales shoot from 40 million units in 1951 to 320 million units in 1956. Aerosol sales have shown a steady increase of about 30% every year since '51!

Here's how you can get into this dynamic, high-profit field practically overnight—without heavy capital investment!

If your product can be sprayed, brushed on, dusted or daubed, it's a likely candidate for aerosol packaging. General Chemical will help you develop a formulation with the right pressures and compatibilities for your product and container. No cost or obligation! And there are many capable contract fillers throughout the country who will put up your product in aerosol form for test marketing, and handle commercial production afterwards. You do not have to invest in plant, special equipment or personnel to get into aerosols!

To arrange for a special presentation, write or call "Genetron" Department, General Chemical Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.

genetron®



The Right
Propellant
for Every
Aerosol Need!

Call on General for:



Free fact-packed technical manuals, marbet information



A complete aerosa research and devel



Data on many promising new types of



Field assistance with propellant storage, handling

GENERAL CHEMICAL DIVISION · Allied Chemical & Dye Corporation
40 Rector Street, N. Y. 6, N. Y.



THE ULTIMATE IN PRODUCT PRESERVATION!

GAS PACKAGING

MACHINE

FOR EFFECTIVE PROTECTION

OF FOOD PRODUCTS

Supercedes Vacuum Packaging By Replacing The Air With a Positive Preservative — INERT GAS!

The Roto "Gas-Pak" provides the efficiencies of a continuous rotary motion machine—high speed, low maintenance as well as the special "Flush-Back" feature that assures absolute minimum residual oxygen content.

The air is replaced by a pressurized gas "flush" while the package is being formed and is kept out while closure is made because the "Flush-Back" action is operating in the opposite direction to the package flow. Moreover, the constant struggle of the atmosphere to return to a 'vacuumized' package is eliminated by the equalizing effect of the captive gas. Thus positive preservation is accomplished in one smooth, high-speed operation.

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STEIGERWALD Heat Seal Labels

On flat, round, or tapered containers including

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STEIGERWALD HEAT SEAL LABELS without glue save labor and result in better labeling. Regardless of the size, shape or design of the product and the label—there's a STEIGER-WALD HEAT SEAL LABEL without glue for every labeling operation.

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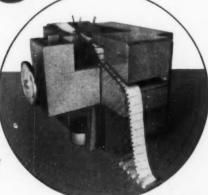
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GAYLORD CONTAINER CORPORATION * ST. LOUIS

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. and you'll bu



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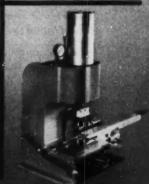
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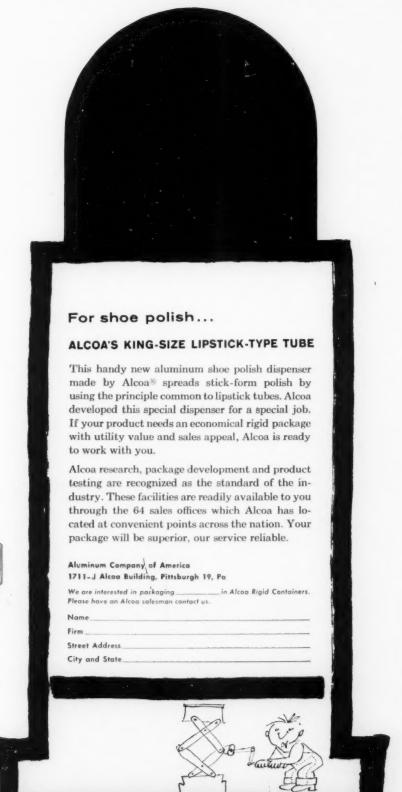
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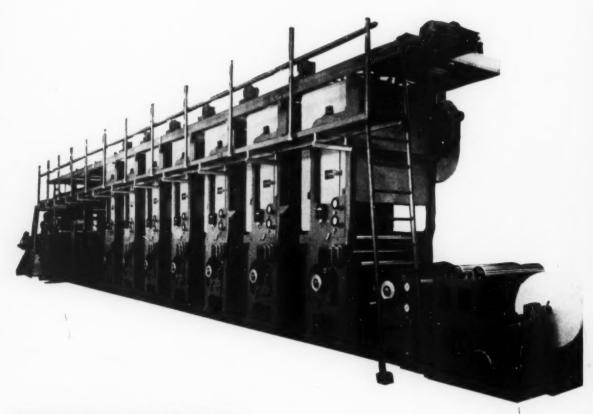
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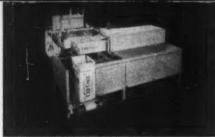
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\$1x \$-qt, cans or gallon cans in 201/6" x 131/6" x 91 1/16" case and 201/4" x 131/6" x 81/4" case



Twelve 46 oz. cans



Twenty-four cartons in 191/2" x 181/2" cas



Eighteen 7 & 8 oz. carton in 30" x 14%" x 8%" case



Sixty cigarette cartons King Size: 17%" x 11½" x 22" Regular: 141%," x 11½" x 22

TYPICAL CASE LOADING PATTERNS FOR CANS AND CARTONS



Twenty-four 12 oz. cans in 14%" x 1015/14" x 55/14" case



Six No. 10 cans in 221/16" x 17%" x 71/6" case



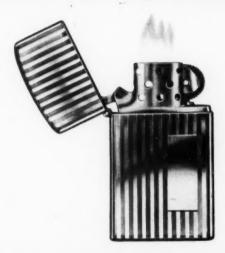
Thirty 1 lb. cartons in 161/4" x 101/4" x 71/4" case



Twenty-four cartons in 191/2" x 101/4" x 7" case



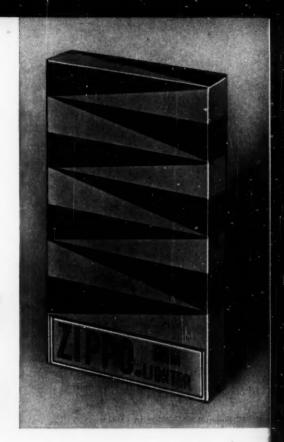
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deserves

A MATCHLESS PACKAGE



and that's just what Dennison designed for Zippo



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"Given a projected problem box, you are able to come up with practical solutions that we can fit into our price structure without sacrificing design features. Call that Dennison cooperative engineering, and add to it the consistent quality of the Dennison product . . . "

Sincerely,
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Dennison-designed set-up boxes may be your key to increased sales.

Call the nearest Dennison office or write Dennison Manufacturing Co.,

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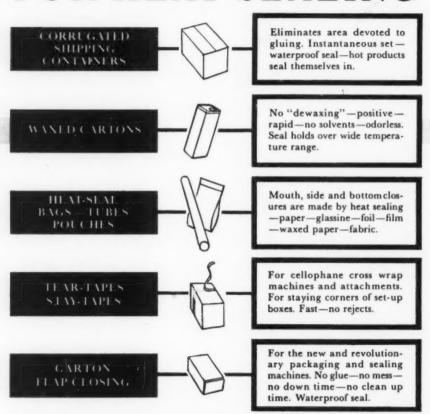
THAT REFLECTS THE PERSONALITY OF YOUR PRODUCT.

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More best-selling Bakery goods are going to market in

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creative abilities, our personal service, and our strategic plant

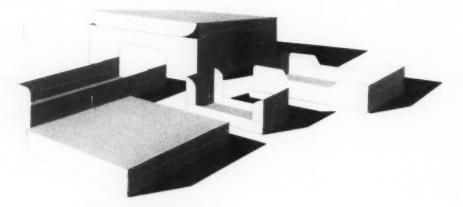
locations supply unusual advantages. Ask our sales representative

for item samples and compare. Ask too about carton forming

equipment for lock-type cartons, lock-type trays, and glue-end cartons.

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Command

Attention

print
your labels
and
wraps
on foil

Send for your sample kit, and see what a wide variety of jobs ROTOGRAVURE turns out for all types of packagers.

Give your packages a selling advantage that will set them apart from the multitude of items and brands that crowd store shelves and counters.

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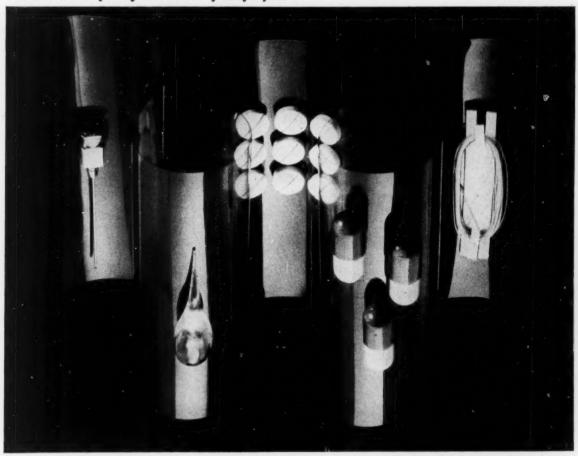




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Wheeling produces quality tubes to package the quality products of many leading manufacturers in addition to The Wella Corporation. You are invited to add your company name to these served by Wheeling. Consultation, engineering and laboratory service are without obligation.

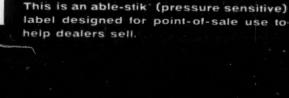
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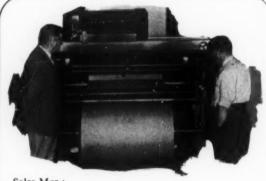
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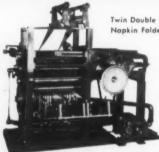


. IN THEIR WIDE RANGE OF PRODUCTIONS YOU WILL FIND JUST THE FILM YOU NEED.

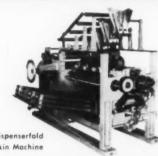
YOU MAY CALL ON THE EXPERIENCE OF OUR TECHNICAL STAFF TO HELP YOU SOLVE ALL PACKAGING PROBLEMS
AS WELL AS ALL QUESTIONS IN CONNECTION WITH THE CONVERSION OF CELLULOSE FILM.

THE ORIGINAL TRADE MARK "CELLOPHANE" REMAINS THE PROPERTY OF LA CELLOPHANE S. A. THROUGHOUT THE WORLD, WITH THE EXCEPTION OF:

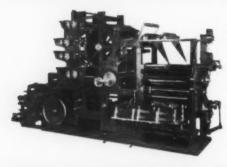
AUSTRIA - BELGIUM - DENMARK - FINLAND - GERMANY - ITALY - MEXICO - NETHERLANDS - NORWAY - SPAIN - SWEDEN - UNITED KINGDOM & BRISTISH COMMONWEALTH - UNITED STATES OF AMERICA - CENTRAL AMERICA (TRADE MARK "FRANCEPHANE")



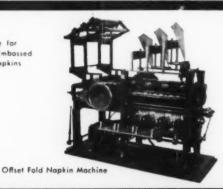
Twin Double Transverse Napkin Folder for Facial Type Napkins



Super Eight Dispenserfold Napkin Machine

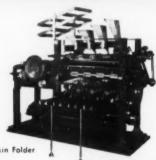


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Single Web Folder with Embossing Unit and Four-Color Printing Presses



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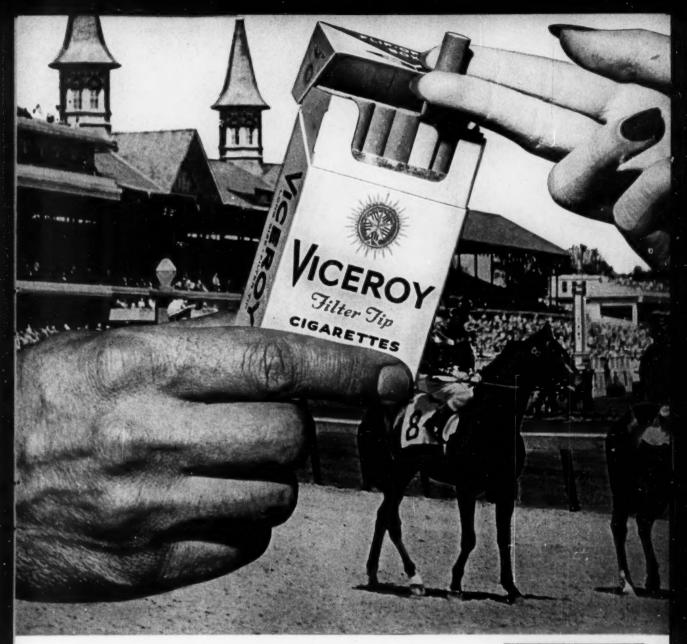
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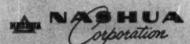


Property could for posteria were generally the finest these "reg" — resistant to age and discolaration.

Demotioned they were given a special feature to held the featile shalls.

But it took the talent of an Edger Degar in convert such paper into the paster masserpose move. The "three Dencers" (1884) has a charming appeal that is testing throughout the years.

he ultimate value of paper depends
upon what you do with it, according
to your skill and talent. This is equally
true of a priceless picture, and a package
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MODERN PACKAGING



Vol. 31. No. 1

September 1957

Featured in this issue . . .

Ten ways to achieve a hang-up package

With pegboard, pin-up and rack merchandising as familiar to the self-service scene as the pushcart and the check-out counter, retailers are asking for hang-up packages for everything from foods to footwear. Sometimes they want convertible packages that can either be hung up or displayed on counter or shelf. Here is an exposition of the principles involved, plus descriptions of some of the most widely accepted methods, as well as illustrations of some of the ingenious new constructions that should be helpful in solving almost anybody's problem.

See "The Hang of It," p. 107

How to make a safe aerosol with dressing-table beauty

Since the beginning of aerosol packaging, the beauty trade has been looking for a container that's more graceful and more pleasant to the touch than the familiar "beer can." Plastic-coated glass has gone a long way in meeting the requirements. But there has long been a continued search for a shatterproof molded plastic container that would add safety, light weight, pleasing shape and touch. Park & Tilford hair spray pioneers with the first molded nylon aerosol, which may be the answer to luxury applications.

**Don't miss "The First Nylon Aerosol," p. 112

Bombshell for the liquor trade: one major distiller drops all decanters

National Distillers has made a bold packaging move by announcing that it is dropping decanters from all of its 18 whiskey brands. The courage of its conviction is evidenced by the fact that this firm is spending \$3 million—the largest single packaging expenditure in its history—to install 10 lines of a new type of cartoning and wrapping equipment to dress its regular bottles in plain cartons with gay foil pre-wraps and printed cellophane overwraps, in line with what it believes to be a new trend of consumer preference. For the first story on this significant move,

Turn to "No More Decanters!" p. 114

The exciting economy of expendable molded plastics



Things have been happening in the realm of molded plastics packaging since molders got away from the idea that such packages had to have re-use value. The trend to throw-away containers for razor blades, ice cream, tomatoes and strawberries has doubled output of molded packages in five years. Even plastic milk containers are a possibility. A few more big-volume uses could put molded plastics into a class with the giants among package-supplying industries. For this month's Supplier Industry Survey,

See "Molded Plastic Containers," p. 120

Will Gourmet Foods be to GF what Cadillac is to GM?

The world's largest producer of packaged foods is embarking on an entirely new and exciting approach to food merchandising. This fall, under the name of General Foods Gourmet Foods, this firm is launching an initial line of 55 de luxe-packaged items, selected "from the finest foods from all over the world" as well as from the United States. The objective: to build a corporate image for quality that will enhance the prestige of such mass-produced GF products as Jell-O and Post Cereals. For the first story on how this has been done,

Read "GF Goes for Glamour," p. 116

What makes P&G one of the world's most successful packagers?

Although the efficiency of its packaging operations has long been the talk of packaging engineers everywhere, few magazines have been privileged to photograph and report the actual workings of a Procter & Gamble plant. This month a MODERN PACKAGING staff writer takes you on a revealing tour of the newest and most advanced of P&G packaging plants, turning out toiletries in Iowa City for half the U. S. In one minute, a single tube-filling line can turn out enough tooth paste to last you for 63 years; one bottling line, enough shampoo for 39 years.

**Come with us "Inside a P&G Plant," p. 128

A famous old name in a new field with an ultramodern package



The famous Bayer name appears for the first time this month on a product other than aspirin. A low-priced nasal spray is packaged in miniature squeeze bottles offering the user new conveniences. Having a personal sanitary spray for each member of the family is suggested by offering a choice of three colors. Pre-assembled, bottom-fill squeeze bottles and a high-speed packaging line permit retailing of the new package, displayed in an ingenious merchandising boot, at about half the price of competitive sprays.

See "Bayer's Squeeze Spray," p. 140

Lock tabs plus glue seal in a can multipack

For years, packagers using multipack cartons or bands have had to choose between lock-tab and glue-seal construction. The lock tab had the advantage of being handled by a more compact machine, since there obviously was no need for lengthy compression belts to "set" glue; some packagers, however, have considered a glue seal more reliable. Now the Pabst brewery in Newark, N. J., has a machine and carton that combines the advantages of both methods: the band-type multipack has both lock tabs and a glue seal on the bottom; because the lock tabs hold the glued surfaces together, no compression belts are needed and the machine occupies floor space of only 88 by 44 in. to turn out 120 six-can multipacks per minute. Applications to many other types of containers, including glass, are being studied.

Read about it in "Compact Multipacker," p. 144

How to get the customer under the bubble



The case of a steel measuring tape is clearly visible in a skin package of conventional construction, but customers almost always want to try out the rule before buying it. Wrecked in opening, the conventional skin package becomes a problem to the retailer if the sale is not completed. To lick this problem, Master Rule has adopted a bubble-type display card that provides easy slide-off removal and replacement of the bubble without damaging the package components—a transparent plastic bubble and a printed display card.

See "Slide-Off Bubble," p. 148

Program for change in a major product line

What happens when a big packaging company decides it's time for a change? An instructive example is provided by the Rexall Drug Co., which in just nine months conceived, developed and marketed nationwide a complete packaging change for its line of Stag men's toiletries. The procedure called for closely coordinated effort by product, packaging, design, purchasing, advertising and marketing departments, and the principles are applicable to every packager, large or small. Turn to "The Stag Story," p. 156

What plastic films will withstand sterilization temperatures?

From Sweden comes the report of an extensive investigation of the reactions of various plastic films to both steam and dry sterilizing temperatures and conditions. The results suggest that with certain of the new high-temperature films, such as the polyesters and nylons, it would be possible and practical to sterilize such products as surgical instruments and dressings after they have been sealed in film bags, provided that the film is permeable by steam at high temperature and is sufficiently strong to withstand the built-up pressures. For comparative data on 17 different film materials,

See "Heat Sterilization in Plastics," p. 165

THE HANG OF IT

Will it hang? This is a question retailers today are asking packagers of everything from foods to footwear. The trend to hang-up packages, gaining momentum every day, is one of the most significant packaging facts of 1957.

Rack merchandising today is almost as familiar to the self-service scene as the market basket and the check-out counter. And efficient package constructions to hang up the vast number and variety of products being sold in this manner are fast becoming acknowledged "musts" for manufacturers in many fields seeking wider retail acceptance.

In supermarkets, pegboard fixtures for the hang-

The package that hangs

from a peg or fixture so perfectly fits

today's selling conditions

that it has become a major trend.

Here are 10 ways of getting a 'hang'





Pal's hang-up is simple and effective.

ing package are seen everywhere to gain the additional display space above regular shelving and at gondola ends. In department, drug, hardware, chain and variety stores, at cigar and news stands, packages are being hung from counter racks, revolving racks and wall racks.

Hang-up packages are selling potato chips and snacks, candy, meats, toys, soft goods, housewares, cutlery, hobby tools, nuts and bolts, razor blades, baby goods, jewelry, stationery items, drugs, lipsticks, novelties of all kinds—even swim shoes and house slippers.

Hang-up packages get merchandise within the easy, eye-level reach that encourages impulse purchases. They are economical of space and they keep stock orderly. Not only can they sometimes be displayed in areas heretofore unused for merchandise display, but they often require a third to two-thirds less space than the same quantity of shelf- or counter-stacked packages. And because of these good qualities they frequently win display spots a product might not otherwise receive. An example may be found in the hang-up film packages for pre-cooked luncheon meats now frequently seen on hooks above refrigerated food cases. In such locations, they often inspire a purchase that a shopper might not otherwise have thought of.

For established products conventionally displayed by stacking, it may be desirable today to consider a convertible package—one that can be either hung up or displayed on the counter to meet requirements in different outlets, sometimes display requirements in the same outlet.

Obviously, there are many ways to construct a hang-up package. Modern Packaging has selected 10 examples for discussion on these pages. They were chosen to illustrate (a) some of the more widely accepted methods and (b) some of the unusual constructions that should be helpful in solving the problems of similar hard-to-manage hang-up items.

1. Punched card with die-cut slots. Pal blade packages illustrate the simplest means of getting merchandise out front in hang-up locations. The Pal method consists of a die-cut punched card to which the tiny blade cartons are attached merely by slipping them by hand over a die-cut tongue in the card. This method has been used for years to give bulk to numerous small items; to provide display space for printing brand identity and selling features; to merchandise multiple units of the same item, and to sell related items by providing a convenient way to hold them together. Items may also be attached to punched cards by stapling or taping.

2. Saddle label on a bag. Capitol Brand "Little Nut House" packages by Empire State Nut Co., Albany, N. Y., demonstate one of the most widely used constructions for hang-up packages. The Empire State packages are polyethylene-coated-cellophane, heat-sealed bags with stapled saddle labels. The transparent bag—cellophane, polyethylene or polyester—with saddle label attached either by stapling or heat sealing offers one of the most versatile ways to accommodate items of the widest



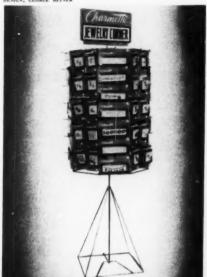
Film reveals, header sells.

variety of sizes, shapes and consistency, covering everything from potato chips to marbles. Transparent bags give maximum product visibility. Saddle labels provide ample printing area for brand and product information. Mechanical methods of bag filling, sealing and attaching labels offer efficient and economical means for producing these hang-up packages at high speed. Newer types of films like the polyethylene-coated cellophane used for the nut packages illustrated here, as well as polyethylene and polyester, have greatly broadened

the use of this type of packaging for soft goods, hardware and toys where strength is needed.

3. Thermoformed blister on a card. A typical example of the transparent-blister technique is the packaging of a complete line of jewelry made by Charmette Mfg. Co., New York. All items—bracelets, earrings and brooches—are mounted under transparent formed pieces of acetate sheet, held in place by glueing the blister between folds of a diecut window card. The whole line is merchandised on a revolving floor stand in supermarkets. Similar methods are being used today for all manner of small items from toys and hardware to tubes of

DESIGN. GEORGE REINER





Protected by plastic for mass display.

medicinal and cosmetic creams. Cutlery items and hobby tools become especially attractive impulse items when displayed in neat transparent skin packages, distinguished from blister packs in that the thermoformed section is contoured to and closely adheres to the exact shape of the packaged object. Thermoformed pieces are attached to cards not only by glueing, but by heat sealing and stapling. Slide-tracks also may be used.

4. Extension flap on folding carton. A window carton for De Luxe brand children's suspenders shows how easily a standard folding carton can be made into a hang-up package by incorporating an extra hanging flap as an integral part of the carton

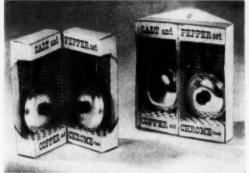


Hanger is part of the box.

design. Suspenders are hand packed in the folding cartons. Special care must be taken, designers say, to be sure cartons are cut from the board sheet so that the flap hangs across the grain to provide necessary strength.

5. Wrap-around sleeve with hang-up flap. Brillium Metals Corp., Jamaica, N. Y., makes novelty salt and pepper shakers that look like miniature copper and chrome skillets. To create an atmospheric package background for the product, a package designer skillful with unusual carton constructions designed from one piece of die-cut and printed board a two-compartment, self-display folding box with die-cut open front. When opened for counter selling, the carton displays the miniature skillet shakers each in its own compartment as though hanging against a kitchen brick wall. The kitchen illusion is carried out further by base inserts printed to look like a linoleum floor and out-

DESIGN, ALAN BERGER; PACKAGE, TOWER CONTAINER



Counter package can also be hang-up.

side surface printing resembling pine paneling. When the box is closed it resembles a cook book for extra gift appeal. An amusing inscription reads, "A spicy story in two parts."

To get the product into broader markets, the company found-along with so many other packagers-that it needed a hang-up package. The designer accomplished this with only slight modification of the basic package. The two sections of the double carton are bent backward until they are parallel. A glued paperboard sleeve with a hang-up flap is slipped around the entire outer edge of the carton, locking it into a flat position. This assembly is overwrapped with a second sleeve of acetate film to provide complete product visibility and protection against pilferage. Result: a package that may be hung on any standard pegboard or hang-up fixture. So successful is this item in the convertible package that the company already has ordered its second million-an exceptional volume in a few months for a strictly novelty item.

6. Decorative gift sleeve. Last Christmas Charbert used a decorative paperboard sleeve to get small bottles of fragrance in hang-up positions. The package is of folding, die-cut construction with



Interlocking flaps hold bottles.

interlocking flaps to hold the hand-packed bottles securely inside. For seasonal promotions, this is an effective means of turning standard merchandise into impulse gift items. Endless decorative effects are possible. Sometimes these gift packages are shipped as a deal with their own counter-display units made to simulate Christmas trees or other seasonal motifs on which the packages may be hung.

7. Pilterproof hang-up. A Cutex lipstick package illustrates an unusual way to add the bulk that supposedly helps discourage pilferage. The lipstick is first secured in a slot of a narrow die-cut card printed with brand name and essential selling data



Slotted eard in acetate tube.

about the package. The card with lipstick is placed in a transparent acetate tubular container similar to those used for packaging tooth brushes. The result is a package that cannot easily be concealed in a purse and attracts attention on a hanging rack.

8. Die-cut insert in a window carton. American Pencil Co. makes an efficient hang-up package out of a standard window carton for colored crayons simply by using an ingeniously die-cut punched-card insert. This is a convertible package. The insert slides inside a closed carton between the tuck flap and the front panel. A die-cut flange on the bottom of the insert engages with the upper edge of the open die-cut window to retain the insert in the package. The top of the insert, extending above the carton, has a hole for hanging. If a dealer prefers to display the packages flat on counter or shelf, he simply removes the insert. For shipment, the





Card slides up for hanging.

inserts are shoved inside the carton, flush with tuckflap end. When this is done, a dealer message printed on the insert shows through the carton window: "To display on rack, bend flap upward and push card up." **9.** Hang-up cord on transparent box. 1. J. Moritt Products Co., New York, with the package for its Jet Brush dishwasher, has demonstrated how

.....



Just a loop through the top.

a transparent acetate box can be turned into an effective hang-up package simply by securing a silken cord loop through the top end of the box. This idea could be adopted for numerous luxury items, particularly in the toiletries field.

10. Paperboard collar for hanging tubes. Northam Warren devised a die-cut paperboard collar which is placed individually over the necks of polyethylene squeeze tubes containing Cutex Hand Cream so that they may be hung up on counter



A way to get tubes in open display.

prong racks. This method suggests new display techniques which tube users have been quick to take advantage of. Originally adopted for squeeze tubes, it has equal possibilities for displaying metal tubes without the use of an outer carton. Many novelty effects to attract attention are possible by variations of these common hang-up packaging techniques.

One manufacturer has made an attractive re-use package for a doll's outfit by designing the window carton as a miniature suitcase that hangs by means of the die-cut handles.

Another toy manufacturer puts a tiny phonograph record cut-out at the top of a card for a blister pack containing a doll. The phonograph record is made similarly to the acetate film disks once glued to Wheaties premium cereal cartons.*

Cory Corp. calls attention to the visible barrel of its Autopoint 3X Ball Point Pen that holds "3 times more ink" by mounting the pen on a pilfer-proof card, die cut in the shape of a barrel to hang on pegboard or prong rack.

Opportunities for design originality are unlimited, but it must be remembered that these packages, like all packages for self service, must meet today's basic selling requirements with the following essentials of good construction and good informative labeling.

▶ Sturdiness is needed to withstand shopwear. All hang-up devices must be strong so that they will not tear or pull loose during arrangement by stock personnel or when taken off for shopper examination and purchase.

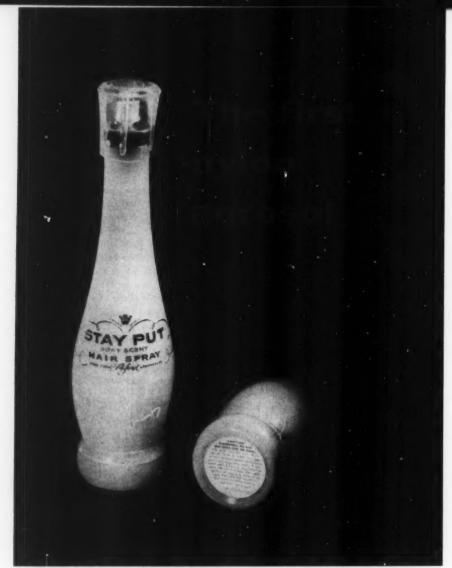
▶ Ease of handling is important to facilitate the loading of prong racks. Hang-up devices that take too much time to arrange waste labor that costs the retailer money and adds to overhead. Packages that are difficult to hang because holes or grommets are too small for fixtures soon lose retailer acceptance.

▶ Directions for care and use of the product must be given serious attention. The consumer must be told on the package exactly what to do with the product. If it is soft goods, she must know if it is washable and how to wash it. If it contains hardware fixtures, directions must show explicitly how to assemble the parts. Most firms print such data on the back of the card or on the back of the saddle label.

▶ Quantity contained is mandatory information required for packages in many product categories. It is equally important to show quantity prominently on packages containing multiple units of the same item. Nothing is so irritating to a shopper as not being able to find out quickly, for example, how many curtain hooks or drapery rings are in a single package.

▶ Price spots should be given a specific place for easy marking by store employees and for quick readability by the shopper.

^{*}See "This Package Sings," MODERN PACKAGING, Nov., 1954, p. 132.



More feminine, more graceful, the new nylon aerosol has a pleasing dressing-table look.

yes of the cosmetic world this fall will be on the first commercial application of a molded nylon aerosol, adopted by Park & Tilford for Stay Put Soft Scent Hair Spray.

From the inception of expendable aerosols some 10 years ago, the cosmetic industry has been looking for a container more feminine, more graceful and more pleasant to the touch than the familiar "beer can." Plastic-coated glass aerosols have gone a long way toward meeting this demand. But there has always been interest in molded all-plastic aerosols, because of the warmth, light weight, strength, color and design freedom inherent in the material.

Cost and other problems have been drawbacks. Recently, interest has centered on new nylon compounds, specially formulated for the purpose, and new molding and joining techniques. The Park & Tilford aerosol—aimed, along with the rest of the company's lavishly packaged new fragrance line, at the luxury market—owes its successful production to blow molding with new nylon formulations and graceful design achieved with economical use of material.

Acceptance of the container will be of greatest interest to marketers of hair lacquers, colognes and antiperspirants in price brackets where prestige and eye appeal are all important. Park & Tilford hair spray in the nylon aerosol, containing $4\frac{1}{2}$ oz., will retail for \$1.50, the same price at which $6\frac{1}{2}$ oz. of the same product is offered in a metal aerosol.

Park & Tilford hair spray pioneers a new material
and molding method long considered
a likely answer to the special aerosol problems of luxury cosmetics

The nylon aerosol should also be of interest to manufacturers of antibiotics and other pharmaceuticals for which protection and container appearance can be considered as outweighing cost. The tough, virtually unbreakable nylon bottle is said to be more shock resistant than any other molded container.

Contributing to the development has been a new formulation of nylon which has a viscosity tailored to blow molding. The blow-molded Park & Tilford nylon container is equipped with a standard valve assembly consisting of polyethylene activator and dip tube, similar to those used on vinyl-coated glass aerosol bottles. It is held in the container by means of a metal ferrule which is crimped on. A transparent polystyrene cap completes the package. Product identification will be silk screened on the bottle. Directions for use and mandatory data are confined to a circular paper label on the base.

The Stay Put hair-spray container, designed with a "dressing-table" look, is cream color and translucent. However, a wide choice of colors is available—even the combining of different colors by a process of "spin welding" together halves of an injection-molded bottle."

An important engineering aspect was the selection of proper wall thickness in relation to diameter to assure efficient function of internal pressure. The larger the diameter, the heavier the wall required to withstand the given internal pressure. This factor may have influenced the tall, slender design of the Park & Tilford container which, in addition to being graceful, conserves costly nylon material.

The "dished" base serves two purposes, according to the engineers. An inwardly dished bottom withstands internal pressure better than a flat plate of the same dimensions and also prevents deformation leading to "rockers" (containers that do not stand straight because of a bulge at the bottom).

Laboratory tests reported by the material manufacturers indicate that a nylon container is negligibly permeable by the propellent and is inert to most of the trouble-making chemicals in cosmetic formulations. Hair lacquer with sheller, after 250 days, is reported to have shown a net weight loss of only 0.3 grams. Similar tests with these containers for antiperspirants are said to have shown a consistently small weight gain. Prospective users

are advised to test each product formulation for a minimum period of three months to determine weight changes due to permeation and possible reactions in the formulations.

While present costs of molded nylon aerosols are difficult to estimate, they probably run 50% higher than comparable vinyl-coated glass bottles and several times as much as standard metal containers. However, it is believed that there is a sufficiently sizable demand for the strength and beauty of molded nylon in the beauty business and in the pharmaceutical industry to justify the cost differential. Lower shipping weight is also a factor.

Supplies and services: Containers blow molded by Imco Container Corp., 75 & Cleveland Sts., Kansas City 30, Mo., using DuPont Zytel 42 nylon. Aerosol filling by Connecticut Chemical Research Corp., 706 Bostwick Ave., Bridgeport 5, Conn. Valve assembly by Precision Valve Corp., 700 Nepperhan Ave., Yonkers 3, N. Y. Styrene caps by Wheaton Plastics Co., Weymouth Rd., Mays Landing, N. J.

Tall shape is functional in that its narrow diameter permits a thinner wall to withstand internal pressure, thereby conserving costly nylon material. Product identity is silk screened on the container. Directions for use and mandatory data are confined to paper label on container base.



[&]quot;And Now-All-Plastic Aerosola," Modern Plastics, Dec., 1955, p. 97.

No more decanters!

National Distillers takes a bellwether position by dropping decanters completely from its holiday line and switching to gift pre-wraps distillery applied on new automatic equipment

or several years the whiskey makers, in their competitive commitment to ever-fancier and more costly holiday gift decanters even for low-profit lines, have admittedly had a bear by the tail. In industry meetings they have deplored this economically unjustifiable type of packaging and looked at each other wondering which would have the courage to be first to let go.

This year, National Distillers has done it. Last month the company made the momentous announcement: No more decanters!

For the coming holiday season, all of this leading distiller's 18 brands of whiskey—including such familiar names as Old Grand-Dad; Old Taylor, Old Crow and Bellows Partners Choice—as well as gin and vodka will be supplied only in regular glass, but gift packaged in pre-wraps automatically applied at the distilleries by new cartoning and wrapping machines that can handle the output of high-speed bottling lines. The investment, the company says, represents nearly a million dollars in machinery alone and will total more than \$3 million for the over-all gift-wrapping program.

National Distillers' move tops that of Hiram Walker, which started the trend to replacing decanters with distillery pre-wraps (for all but its Walker Deluxe) three years ago but went back to a few fancy bottles for certain specialties last year.



Lavish embellishment rather than lavish container is the rule this year for National Distillers' holiday packages. All 18 company brands will use standard bottles—no decanters—in plain cartons with decorated foil overwraps (differing for each brand) and printed, disposable cellophane top wraps. Million-dollar investment in new-type cartoning machinery and wrapping equipment has made it possible.



Over-all view of wrapping operation in the Louisville plant, one of five similar installations in five of the company's plants. Each installation consists of an automatic cartoner and two wrapping machines mounted in tandem. The first applies an aluminum foil wrap; the second, a cellophane top wrap. Equipment is capable of speeds up to 150 per minute.

The announcement of National Distillers' decision was made by B. C. Ohlandt, vice president and general manager, at a two-day meeting of the company's 400 salesmen in August. Said he, "The company will make the biggest packaging expenditure in its history this year (including equipment), but the expensive foil overwraps, ribbons, crush-resistant bows, bells, beads, pine cones and other embellishments will be in keeping with studies revealing realistic retailer and consumer preferences."

National Distillers is falling in with a sound new trend.

Industry figures show that sales of all brands in pre-wraps shot up in 1956—in fact, doubled for that year over the previous season. Of the 8 million cases of quarts and fifths of whiskey sold during the 1956 holiday season, $3\frac{1}{2}$ million cases were reportedly gift purchased—500,000 cases were regular bottles in pre-wraps and 3 million cases were gift decenters.

This year, industry sources forecast sales of holiday merchandise for gift purposes at 4 million cases. Of this, it is expected 2 million cases will be pre-wrapped goods, the other 2 million cases in decanters, constituting a four-fold increase in the sale of gift pre-wrapped whiskey and a decline of a million cases in the sale of decanters.

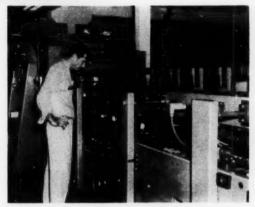
National Distillers gives eight principal reasons for its over-all adoption of gift pre-wraps:

1. They save dealers time, trouble and expense, and give the shopper faster service. There are 60,000 package liquor stores, 75% of them "Mom-and-Pop" stores not in a position to do elaborate gift wrapping. Pre-wraps perform the service for them.

They eliminate the dealer's fear of overstocking, because the pre-wraps can be removed after the holiday season.

They minimize shelf problems caused by awkward, tall, irregularly shaped decanters.

4. They are ideal for selling industrial and commercial accounts, which may order an entire case



Wrapping units apply aluminum foil or cellophane to cartoned bottles from a vertical web of material (left). Flaps are folded automatically in sequence before the packages are transferred to a compression belt to perfect the seal.

in which each bottle is individually gift wrapped.

5. They overcome consumer suspicion of paying extra for fancy glass—a definite deterrent to post-holiday and non-gift sales.

6. They can readily be applied to quarts as well as fifths, encouraging quart sales, while decanters are too expensive to be made in both sizes and usually come only in fifths.

7. They help to eliminate the confusion of "too many decanters" which has actually turned shoppers apathetic. (There were about 60 different brands of whiskey in decanters in the average package store last year.)

They maintain the valuable brand identity of the regular bottles, on which distillers spend millions of dollars a year in advertising.

National Distillers' gift- [Continued on page 255]

Supplies and services: Automotic cartoning machines by R. A. Jones & Co., Inc., P.O. Box 485, Cincinnati 1, Ohio. Wrapping machines by Package Machinery Co., East Longmeadow, Mass.

GF goes for glamour

Distinctively packaged new line
of Gourmet Foods is intended
not only to put General Foods
in new markets, but to enhance prestige
of the company's mass-market items

The introduction this month by General Foods Corp. of an extensive line of "Gourmet Foods"—exciting products excitingly packaged—marks a bold new merchandising tack by one of the world's largest packers of convenience foods.

Aside from the opportunity it presents for penetration of a profitable new market, it is an obvious attempt to add prestige to the General Foods name—to associate gournet quality with such famous mass-market GF products as Jell-O and Post cereals.

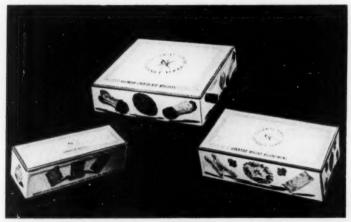
Gourmet Foods may be to General Foods what Cadillac is to General Motors.

The initial line will total 55 items, selected "from the finest foods from the far corners of the world" as well as from the United States. They will be distributed solely through department stores and specialty stores featuring unusual imported and domestic foods.

The line consists of a wide assortment in these major categories: biscuits and cookies, preserves, soups, cocktail snacks and hors d'oeuvres, entrees, entree sauces, desserts and sauces, coffees and teas.

Typical are lobster bisque from France, lingonberry preserves from Sweden, hearts of palm from Brazil, Sauce Bolognaise from Switzerland and ham from Denmark. Others include cafe-diable mix and cherries jubilee from the United States, cookies and





Biscuits and cookies from England and Belgium are in metal boxes with lithographed labels.

Design theme had to be adaptable to all sizes, shapes and types of containers in an initial line consisting of 55 different items.



biscuits from England and Belgium, green-turtle soup from West Germany.

The venture is significant to packagers on a number of scores:

▶ It is probably the first all-out attempt by a major, mass-market, American food manufacturer to enter the luxury-food market.

▶ It represents a complete departure from usual concepts of food package design.

It offers, for the first time, according to GF, a carefully selected, well-rounded assortment of packaged items that fancy-foods retailers can order as a complete line with the assurance that it will be maintained to rigid American quality standards. This concept, it is believed, will be particularly acceptable to retailers of imported fancy foods who in the past have been dependent mostly on numerous small importers for individual items.

With average family incomes running over \$5,000 after taxes, with almost a million Americans driving Cadillacs, with pleasure boating a \$1.3-billion business, with \$45,000,000 worth of champagne and \$8,000,000 worth of cavier consumed by Americans last year—General Foods believes that the economic climate is right for this venture.

Plans have been brewing for more than a year. They have involved setting up a special operation to handle the line, headed by Joseph Starke, who has had years of department-store experience as former executive vice president and general manager of Amos Parrish & Co., Inc., leading counselors on department-store selling problems. Spadework entailed visits to a dozen or more foreign countries by GF representatives to select the items and establish product and packaging requirements with the manufacturers of the chosen items. There have been months of testing by the GF kitchens and many months of package development.

Design thinking

Early in the game, it was determined that a package design for this new line of GF Gourmet Foods products should (1) distinguish their international

White backgrounds with gold accents were selected as combination most expressive of elegance and luxury. Golden compass theme for trademark is in keeping with international character of the products. "Floating" illustrations are used to identify each of the products with subtle suggestion rather than conventional realism.

and luxury character and (2) be timeless in concept.

To create such a design, GF went to a woman designer known primarily for her outstanding work in toiletries and cosmetics, as well as other fields. For years she had wanted the opportunity to put into practice her theory that food packages should be taken out of the realm of the commercial and designed for their appealing appearance on the table or pantry shelf.

The GF Gourmet line has presented that opportunity. White backgrounds and gold accents on all cans, labels and closures were selected as a combination most expressive of elegance and luxury. Corporate and product name in Perpetua lettering, arranged around a golden compass theme with the corporate initials in the center, establish a trademark symbol in keeping with the international character of the products. Futura medium condensed type, used for product names and descriptive copy in black, complements the white and gold theme with dignity and restraint.

For product illustration, it was felt an entirely new approach should be tried. After many experiments, the answer was found in a technique interpreted by a portrait painter and illustrator. With oil monoprint, he has created the illusion of "floating" ingredients, cooking tools and utensils over "floating" shadows—a technique that identifies each product by subtle suggestion rather than by conventional realism.

Breakfast coffee, for instance, is suggested by floating illustrations of an old-fashioned coffee grinder in combination with a botanical representation of coffee beans. Potage St. Germain is represented by drawings of vegetables floating above a steaming pot of soup. The illustrations, says the designer, were conceived "to be just enough off the

Custom-mold glass gives distinction to package appearance on the table or pantry shelf. Trademark symbol is on all jar caps and tops of cans.



ground' to create an impression of lightheartedness and simplicity that means elegance and says, bon appetit."

Insofar as feasible, all imports are packaged in containers made in the lands of their origin, but produced to exact specifications of GF's Central Research Laboratories. Where suitable packaging materials proved unavailable abroad, supplies have been shipped to the foreign food processors from the U. S. to assure uniformity and quality. The custom-mold glass containers are being produced both in the United States and abroad.

All paper labels are printed in the United States and shipped to the various packers in foreign countries. This assures uniform printing quality and correct mandatory copy to comply with legal requirements for packaged food products destined for sale in the United States.

Incoming shipments from all sources are checked against quality-control standards for each item established by GF and its laboratories to assure constant uniformity of product and package protection. Packaged goods from countries which cannot meet these and the U. S. Government's rigid standards will not be accepted.

When GF President Charles G. Mortimer announced the Gourmet Foods line at the company's annual meetin; in July, he said, "Don't expect to see them before Thanksgiving." This gives an idea of the details involved. In several instances labels are being shipped air freight to Europe to speed deliveries for the peak Christmas holiday shopping season.

The gourmet products will be presented in specially designed store display units which will be offered with the line through GF's new Gourmet sales and distribution organization. Retail prices will be comparable to competitive fancy-food items.

The company expects the Gourmet foods—designed primarily as a prestige builder—to contribute modestly to GF earnings. It also expects the Gourmet line may now and then uncover a new product suitable for mass exploitation.

Supplies and services: Design by Josephine von Miklos, Pound Ridge, N. Y. Product illustrations by Lawrence Beall Smith, Cross River, N. Y. Labels by The U. S. Printing & Lithograph Co., 340 Beech St., Cincinnati 12, Ohio. Other supplies from U. S. sources: Cans by American Can Co., 100 Park Ave., New York 17, and Continental Can Co., Metal Div., 100 E. 42 St., New York 17. Tea canisters by J. L. Clark Mfg. Co., 23 Ave. at Sixth St., Rockford, Ill. Glass containers by Owens-Illinois Glass Co., Toledo I, Ohio. Closures by Owens-Illinois; Crown Cork & Seal Co, Inc., Eastern Ave. & Kresson St., Baltimore 3, Md., and White Cap Co., 1819 N. Major Ave., Chicago 39.



Into the back, through die-cut door, goes folding pocket slide viewer. Butyrate blister which holds the viewer has already been heat sealed to the face of card by supplier. With a single motion, the package is fipished and ready for hang-up display. A single packer can handle 500 an hour.

Trap-door blister

Novel construction of Admiral Photo's card permits the use of pre-formed packs, through which slide viewers are inserted from the back and locked in

Use of a blister pack usually requires a choice between having your product contract packaged outside, or installing blister-packaging equipment in your own plant. Important, therefore, is a new "back trap-door" blister pack that eliminates either necessity, since it's a ready-to-use and low-cost package delivered directly to the packager's plant.

Admiral Photo Products Co., Chicago, uses it for the company's pocket-sized slide viewer which it sells through camera stores across the nation and will place in drug stores and possibly supermarkets with the advent of the new hang-up card blister.

The acetate butyrate blister, off center, does not cover the entire card. A ½-in. flange all around is

heat sealed to the face of the thermoplastic-coated 5-by-7-in. card, printed in two colors. Directly behind the blister is a die cut on three sides. This preformed package is shipped from the package manufacturer to Admiral.

At Admiral, a packer pulls back the card's trap door, inserts the viewer and simply snaps the diecut flap sheet. The flap is locked into place at the top of the die cut by a built-in accordion pleat of the blister, under which the paperboard flap's top edge is forced as it is closed.

One packer can complete approximately 500 packages in an hour.

Supplies and services: "Self-Pack" package construction and manufacturing by Ralph L. Crowley & Co., 550 W. Wisconsin St., Chicago 14. Heat-seal coating by Paper Converting & Finishing Co., 118 N. Ada St., Chicago 7. Artwork by Leonard Advertising, 21 E. Superior St., Chicago 11.

Door is locked by snapping flap in protruding, pleated top flange of front blister (just over words "dual lens").



Growth of the throw-away psychology has doubled the output of this supplying industry in five years and opens the way to real competition with basic package materials

MOLDED DELASTIC CONTAINERS

The biggest thing that's ever happened in molded plastics so far as packaging is concerned is the acceptance of the idea that packages are made to be thrown away. Plastics molders are no longer thinking in terms of re-use refrigerator jars and trinket boxes made to last a lifetime. Taking a tip from the makers of cartons, cans and bottles, they have come to the realization that volume lies in low-cost, single-use expendability.

It is this concept—and this one only—that conceivably someday can make molded plastics as big in the packaging field as are paper, metal and glass.

Spectacular examples of multi-million-unit uses of expendable molded plastics in containers for razor blades, ice cream and other foods, in tomato trays and berry baskets, are demonstrating that a plastic package, while it may be a thing of beauty, need not and should not be a joy forever. Consumers are learning to throw these containers in the trash can as nonchalantly as they would discard a paper cup—and in that psychology lies the future of molded plastic packaging.

The impact of this idea can be traced in the steadily rising poundage going into molded plastic packages.

The present annual figure is more than double that of the 30,000,000 lbs. reported for the same purpose only five years ago—one of the sharpest gains in all the fields of packaging supply. Industry sources estimate that 65,000,000 lbs. of molding compounds will be used for molded plastic packages during 1957.

These figures cover only the plastics materials

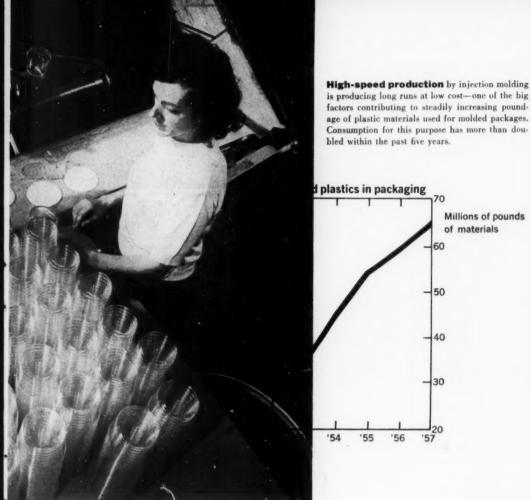


PHOTO COURTEST PLASTIC CONTAINER CORP.

used in compression and injection molding of packages. A considerable additional volume of resins goes into molded closures and into the production of squeeze containers by blow-molding and extrusion techniques. Because each has a distinctly different story behind it, these two areas—closures and squeeze containers—will be covered in separate articles later in this series and will be excluded here.

The range of sizes and uses of molded plastic containers is so extreme—from the tiniest medicinal vial to a guided-missile container weighing 70 lbs.—that figures in number of units would be pointless and no one has attempted to keep such statistics. It is a safe guess, however, that the number of molded plastic packages, despite recent growth, still would be counted in the hundreds of

Every-day purchase is encouraged by new, lightweight, throw-away packages that sell on their own merits rather than for "re-use value." Disposable packages of plastics for delicatessen items, ice cream, tomatoes are constantly winning a more conspicuous place in shoppers' push carts.





millions per year, rather than in the astronomical billions reported by the paper, metal and glass package-supplying industries.

THE PACKAGE

The Gillette Blue Blade dispenser-the first molded plastic package to reach a volume of millions per year-has been running a hundred million or more a year since 1951-which indicates that at least a billion low-cost, polystyrene, throw-away containers have been used since the package was introduced in 1947.

Bauer & Black and Johnson & Johnson are now using millions of molded dispenser packages each year for adhesive tape. Molded plastic vials used by pharmaceutical manufacturers and by druggists for pills and capsules are beginning to cut rather seriously into glass in that type of package.

The Ice Cream Trade Journal recently reported that 39% of the nation's more than 300 ice-cream producers are using plastic throw-away containers for sherbets and ice cream. The same polystyrene throw-away container with polystyrene or polyethylene lid is moving heavily into the field of prepared salads and other delicatessen items.

The lattice-type, low-cost plastic tomato tray recently has made the paperboard tray take a back

seat in some markets. In Chicago it is reported that 70% of all pre-packaged tomatoes are now being sold in plastic trays; half of the tomatoes in Detroit and nearly half in Indianapolis and Louisville are reportedly in this type of package. Similarly, the lattice-type plastic berry basket is making inroads on previous forms of packaging.

Growth of this type of throw-away package has dwarfed the kind of re-use plastic package which previously was the mainstay of this industry, although there is still sizable volume in the hinged-lid polystyrene razor kit; the molded packages for tooth brushes, fishing tackle, tools and instruments, sewing kits, physicians samples; cosmetic compacts for compressed face powder; nasal inhalers, and hinged-lidded boxes for products as common as straight pins.

The consumer appeal of the plastic container, in its big uses today, is primarily visibility. When tomato packers first started using polystyrene trays, they had to charge a premium of three to four cents a package; they were astonished to find that shoppers would gladly pay this for the privilege of viewing the fruit from all sides to be assured of its ripeness.

The appeal to the packager, in addition to consumer demand, may also be the very practical one of saving in shipping weight. A transparent plastic jar may weigh only one-fifth as much as a comparable glass container—the only other rigid transparent package.1 In the case of a product packaged on the coast and shipped to all parts of the country, the saving in freight may far outweigh the extra cost of plastics.

Almost 95% of what is considered here as the molded plastic container market is held by polystyrene, according to latest industry estimates. Polystyrene has come up very fast in the last five years. In fact, the whole impetus toward the new throw-

¹See Design Histories, MODERN PACKAGING, June, 1957, p. 89.

away concept can be attributed to developments in polystyrene resins, giving them strength and low cost in thin molded sections, and to improvements in injection-molding techniques leading to highspeed, automatic production of these economical package forms.

Container costs are governed to a large extent by mold costs. The use of standard stock molds has been an important factor in the growth of bigvolume applications. But even custom molds, costing up to \$10,000 or \$15,000, can be justified when they can be written off on multi-million-unit runs.

The molded plastics packaging industry is comprised of manufacturers of basic plastic compounds—resins, plasticisers, etc.—and manufactures of molding equipment who, in turn, supply hundreds of molders throughout the country engaged in the production of molded plastic containers.

Of the 30 or so suppliers of molding materials, possibly eight or 10 are real factors in the packaging field. Plastics-material production for molded packaging is still a relatively small part of the overall plastics market.

DEVELOPMENTS

Successful growth in the volume use of molded plastic packaging is due to continuing cooperative development between the plastics and packaging industries.

The biggest single step in overcoming the cost hurdle has been the acceptance by packagers of the idea that molded containers could be made just strong enough to do a single packaging job. Today's typical low-cost polystyrene ice-cream container or tomato tray is so thin in section that it can be crushed rather easily when empty; yet when filled with product it is quite adequate. The relative fragility of the emptied container has helped to convince the housewife that these containers are not to be saved, but to be discarded like any other package; it also gives her assurance that she is not paying a great premium price for this attractive package, and she has no hesitation about buying her favorite brands of ice cream and tomatoes in plastic packages day after day.

Thus the idea of expendability pays off all along the line: the container uses less material, is molded faster and more economically, wins consumer acceptance and builds the steady repeat sale which really means volume.

Improved packaging equipment has been designed to save time and labor in the packager's plant. Special feeder devices now release plastic

food containers singly from a stack and hold them upright and secure on a conveyor line. Because of their extreme light weight, this is no easy trick. Special capping machines have been designed to apply polyethylene lids. One of these requires no more attention than to dump a box of lids into a hopper from which the lids are automatically unscrambled, deposited one by one right side up on the containers and pressed into place at speeds up to 50 per minute.

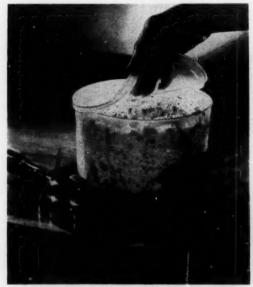
With these mechanical aids, a molded polystyrene ice-cream container, produced and filled, reportedly costs little more than a paper container.

Improved formulations of molding compounds that impart new properties to plastic containers are an important factor in increased usage. Rubber-modified styrenes are considerably tougher and are now available in translucent colors, opaque colors and a natural color. Certain grades of styrene have high heat resistance to withstand certain sterilizing temperatures.

The new high-density polyethylenes promise to open up a bigger market for this plastic in containers because of improved tensile strength, rigidity and ability to withstand high temperatures.

New blends of polystyrene and acrylonitrile have both high-impact and heat resistance. A new material called polypropylene [Continued on page 240]

For ice cream, the thin-walled, high-impact container has caught on so fast that more than 39% of ice-cream producers use it in some form. This is ½-gal. size, thin walled, molded of high-impact polystyrene, with flexible polyethylene lid.



PROTO COURTEST MONSANTO CHEMICAL CO.

Color-keyed detergents for institutional use



Color-coded packages that help the user select the right compound for the job at hand have been adopted for a line of detergents produced by Calgon Co., a division of Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. These six cleansing compounds are merchandised directly to end users such as schools, hospitals, hotels and food-processing plants, which usually stock more than one type. A quick, easy way of identifying each detergent was needed if maintenance, kitchen and sanitation help were to use the various products effectively.

This was achieved by wrapping the containers in printed aluminum foil, colored differently for each compound. Wrapper color matches that of the detergent wherever possible. Striped wrappers denote compounds for machine dishwashing use and bubbles reproduced on some wraps identify foaming detergents as opposed to the sudsless type. The foil wrappers also protect these products from moisture.

Supplies and services: Wrappers by Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.



School-house approval for chip bag



The silhouette of a feminine figure has been a prominent part of the logotype on glassine bags used for years by the Salem Potato Chip Co., Akron, Ohio. The silhouette was used to illustrate that a slim figure could be maintained while enjoying potato chips. It apparently had never been objectionable to the general market, but one segment—the school cafeterias—and a sizable one saleswise, did object strongly. In fact, they objected so strongly that the company has taken a completely new approach to the packaging of its nickel-sized bags.

Cartoon illustrations of a happy boy and girl, printed in black with gay red, white and blue color scheme, now replace the silhouette. Approval by school officials has been reflected immediately in increased sales. The package received honorable mention in the Glassine & Greaseproof Mfrs. Assn.'s 1957 design competition.

Supplies and services: Label design by Smith-Scherr-Mc-Dermott-Designers, 47 S. Portage Path, Akron 3, Ohio. Glassine bag by Oneida Paper Products, Inc., 10 Clifton Blvd., Clifton, N. J.

Same vignette eleven different ways

The adaptability of one four-color stock vignette to numerous distinctive brand treatments is illustrated by eleven strikingly different top labels for eleven different packers of meat products.

All are based on the same process-printed stock picture of a hot-dog sandwich. The striking contrasts between these labels have been attained by varying background colors, brand logotypes and product identification copy, as well as by changing the position and size of the several type faces employed. Measuring 3 by 5 in., these top labels are printed by rotogravure on white stock. A specially developed coating on this stock is reported to provide a positive seal to all types of films and papers.

A similar variety of labels, based on a single full-color illustration of an appetizing hamburger sandwich is being used by the same eleven meat packers.

Supplies and services: Labels by Marathon Corp., Menasha, Wis., using "Kromekote" stock made by The Champion Paper & Fibre Co., 601 N. "B" St., Hamilton, Ohio.



Design Histories

Parliament shipper duplicates package design

A shipping carton designed to look like a giant pack of Parliaments is reported to be the first cigarette shipper that duplicates exactly the individual package surface design on all six sides.

When the new Parliament flip-top box was introduced last year, its distinctive blue and gold surface design was awarded a Package Designers Council Competition Certificate of Merit. This design was carried over in expanded form to the 10-pack carton. To meet rising orders, Philip Morris, Inc., has doubled the size of the former Parliament shipping container to carry 60 cartons, or 12,000 cigarettes.

The new shipper is made of corrugated with a bleached white outer liner. Printed with the identifying chevron trademark and slanted brand name in royal blue color, it provides peak identification by shipping personnel, warehousemen and retailers, the company believes.

Supplies and services: Corrugated container by Hinde & Dauch, 407 Dectaur St., Sandusky, Ohio. Original package design by Egmont Arens, 480 Lexington Ave., New York 17.





No mistaking type of calendar and type of holder it fits, with the new polyester-film wrap. End flaps of U-board carry the same shelf information as previously appeared on paper-board carton. Strength and long life of polyester make this tough packaging job possible.

A year in film

That's the product and that's the requirement for Ever Ready desk-calendar refill pads, now successfully packaged, with many advantages, in polymer-coated polyester film

Desk calendar pads come in many sizes, shapes and formats; a prospective buyer needs to examine a page to be sure of getting the proper refill for his calendar base and memorandum needs. Drawn out of the conventional carton for inspection, the pad is likely to suffer torn or dog-eared pages when it is pushed back into the box, making it unacceptable to the customer and useless to the retailer.

To bring refill pads out into the open and to protect them from damage in handling, the Ever Ready Calendar Mfg. Co., Jersey City, N.J., is now wrapping many pads in the new type of clear, tough polyester film that is coated with a saran polymer to make it heat sealable. One of the first automatic machines designed to handle this type of film is used by Ever Ready to wrap and seal the package.

Polyester film is the first practical packaging film

to meet the requirements of this kind of packaging: a heavy object, subject to handling, needing utmost clarity and having up to a year's packaged life before use. Virtually all calendar pads are sold in December and January, and their packaging starts a year ahead of time.

In display value, shelf life and resistance to handling, this type of package is especially well adapted to self-service merchandising of many kinds of stationery and similar products having lengthy selling periods.

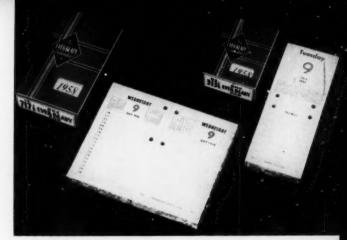
For many years, Ever Ready—probably the largest factor in the business—had packaged calendar refill pads only in a conventional printed folding chipboard carton with the year of use displayed in a die-cut window on the front. Pads topped with label sheets were paper banded, laid in

paperboard slides and inserted into cartons by hand. It took six women to load 11,000 cartons in one day by this method.

With automatic equipment, two women and one machine operator now wrap and seal the same number of pads per day. An automatic feeder folds preprinted U-boards as it places them between lugs on a conveyor belt. Two women lift pads from palletized stacks and place them in U-boards heading for the automatic wrapper-sealer.

A web of clear polyester film passes under a static eliminator bar as it moves into the machine. To hold the thin-gauge film taut, glass marbles in a rack hold the edges down against narrow rubber belts that carry it across the elevator well. As a U-boarded pad rises, the film is automatically cut and wrapped around it in a single pass. Ends are folded as the package is pushed between and over heater plates that seal the end folds and all but two strips on the bottom lap where the conveyor chains pass through the bottom plate. These openings provide a handy finger grip for the purchaser to open the package.

Originally, the company had planned to use cellophane for this package, but tests showed that the paper pads would absorb moisture from the cellophane, tending to dry it out and cause splitting when handled. It was apparent that cellophane could not



At a glance, split-pad calendar can now be distinguished from single pad. Split in middle and laid open in U-board as it would be in use, pad in new film wrap leaves no doubt, Previously, in cartons it looked like all other refills.

be counted upon to maintain an intact package over a year's time in all types [Continued on page 241]

Supplies and services: Polymer-coated "Mylar" polyester film by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. Wrapping machine and U-board feeder by Hayssen Mfg. Co., 1305 St. Clair Ave., Sheboygan, Wis. Printed U-boards by Continental Folding Paper Box Co., Inc., River St., Ridgefield, N. J.

Mechanized line, made possible for the first time by film packaging, uses one of the first machines designed for polymer-coated polyester film. Line moves from left to right. Loaded into U-boards on conveyor, pads are wrapped and heat sealed automatically. Three employees now turn out the same 11,000 packages a day that, with previous hand loading of cartons, required six.



Inside a P&G plant

Big packager's newest installation at lowa City is a wrap-up of all that engineering efficiency can contribute to smoothly functioning tube- and bottle-filling lines



These are the products of Iowa City plant. There are three sizes each of Crest, Gleem, Drene and Prell, and three different types of Lilt.

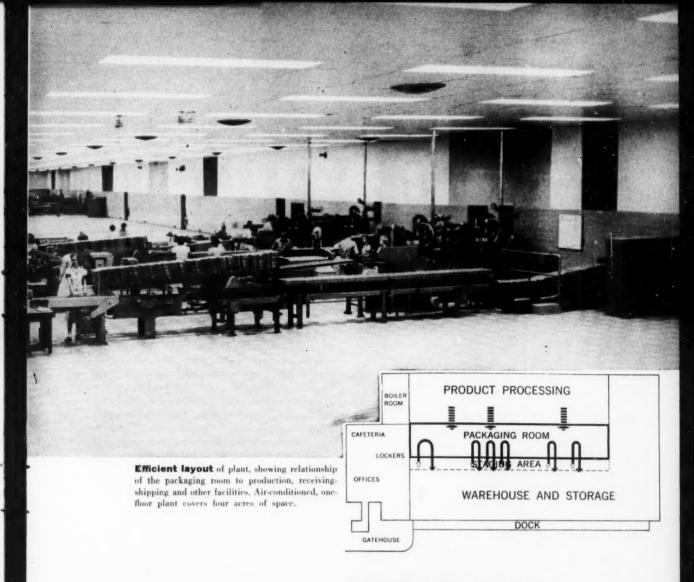


Half acre of space is provided in unobstructed packaging room of new P & G plant in Iowa City, leaving room for future expansion—a company policy. All the lines are U-shaped, stemming from the warehouse-and-shipping area beyond wall to right. All packaging supplies are fed through and completed shipping packages return through this wall. Products feed from vertical pipes. In foreground: three tooth-paste lines; beyond, two shampoo bottling lines. The home-permanent line, located behind camera, is not shown.

emembering that "e" stands for efficiency and engineering is one way to keep in mind that it's "er" and not "or" in Procter & Gamble—one of the nation's most frequently misspelled corporate names. For in the estimation of package engineering people everywhere, P & G has long rated near the top in efficiency and it is probably no coincidence that it is also near the top in sheer number of packages produced per year.

P & G's expertness in engineering and production is exemplified in the packaging-line design of its 15th and newest plant, now operating in Iowa City, Iowa. This new one-floor factory is manufacturing and packaging tooth pastes, shampoos and home permanents for P & G's Toilet Goods Division, the company's second plant to handle such products,

Reasons why Iowa City plant is noteworthy:



▶ It is virtually pallet-less and conveyor-less in the supply and discharge area.

▶ It's a high-production operation, supplying the entire country west of the Mississippi with Gleem and Crest tooth pastes, Prell and Drene shampoos, and Lilt and Party Curl hair waves.

▶ Meticulous package-line pre-planning by packaging and production engineers was completed before construction was begun, eliminating the faults which plague so many new plants.

Although the plant is relatively small and specialized in manufacturing, following an established P & G pattern, the present building can accommodate considerable future expansion. So highly and efficiently mechanized is the operation that the plant began with only a handful of experienced supervisory personnel, the majority of employees having

Push-button controls are located close to the tooth-paste tube-filling line. Box on conveyor in the background is an empty tube carton moving back through the wall to the staging area where it will be returned to the supplier for re-use.



Tube Filling



U-shaped flow is illustrated by close-up of one of three dentifrice lines. Supplies of cartons (left) and boxes of empty tubes (center) enter from supply room through wall windows at rear. In center are two four-head rotary tube fillers. Boxes of empty tubes are sent automatically under fillers; mechanical fingers remove tubes and place them in chucks in fillers; filled tubes emerge on lower line to left to cartoner, and empty tube shippers move around "U" of conveyor, back through wall opening for return to supplier.

Tube cartoning is integrated with filling lines at the rear. Off picture in foreground, cartons are automatically bundled and make a U-turn to another station for casing and case sealing. Completed cases then are conveyed back through wall to the staging area. In right background, note bundles of corrugated shipping containers moving in through the wall to the casing station.



no background in production and high-speed packaging operations.

Half acre of packaging

Of the four-acres-plus under roof, more than half an acre is devoted to one huge packaging room, which is longer than a football field and has no visible ceiling columns. This 400-by-65-ft. room runs down the center of the plant and is the heart of three lengthwise manufacturing areas, the first being the processing area and the third being warehousing and shipping.

The manufacturing flow begins on the processing side of the plant, moves to the middle for packaging and finally continues straight through to the opposite side where completed packages are stored and shipped.

The windowless packaging room, air conditioned to provide needed humidity control, consists of six U-shaped packaging lines: one for home permanents; three for tooth pastes and two for shampoos. There is space for perhaps twice as many lines in the present room before expansion requirements would necessitate lengthening the building.

Though the company has released no production figures, it does state that the plant has the capacity to provide nearly half the tooth paste consumed in the U. S. In one minute, a single tooth-paste packaging line packs enough product to last one person 63 years, while a shampoo line in the same time packages the average user's needs for 39 years.

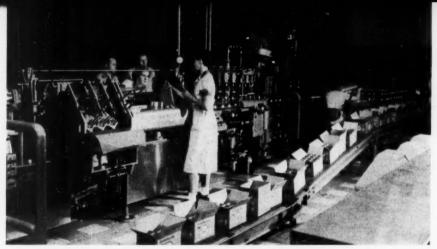
In accordance with the most modern packaging practice, each packaging line is U-shaped, with the top ends of the "U" protruding through a wall into the warehouse area, from which empty containers are fed in and to which completed packages return.

Each U-shaped line, of course, is a combination of several different machines that have been integrated to do the most efficient job for Procter & Gamble. The fact that the company has spent about \$300 million on new plants in the last 10 years—more than it invested in all the company's first 100 years—is indicative of its constant search for improvements. New products and methods have obsoleted about half of its 1945 equipment.

The packaging room, one third again as long as a football field, has a fiberglass acoustical ceiling, glazed ceramic tile walls and recessed ceiling lights, which also run on batteries in case of power failure.

Products are pumped from the processing area through hidden pipes above the packaging room's false ceiling; unobtrusive vertical pipes from the ceiling convey product to filling stations.

Packaging operations actually begin in the warehouse section, where about 75 different packaging materials are stored. One man feeds the packaging



Prell shampoo line is fully automated. This view is from the supply-room wall forward into the packaging room. Conveyor belt in foreground is taking cases, after bottles have been dumped at the beginning of line off to left, to the repacking station at far right of picture. From left to right, the packaging line shows labeler, filling machine, capper and inspection station.

Bottling

supplies to each line and also stacks the outcoming corrugated shippers. Before the plant was built, this method of input and output from a single position lying outside the packaging room itself was pretested by industrial engineers on full-scale dummy lines. The system eliminates carry-off and feeder conveyors that normally handle filled shippers.

Inside the packaging room each line is designed to meet its own special packaging requirements.

Tube-filling lines

Two of the three dentifrice lines are identical fully automatic lines. Nearly all the equipment on each line is mechanically synchronized to start and stop in unison. Cartons of empty tubes are fed from the line's staging area through the wall. The cartons pass automatically under mechanical fingers that lift out the tubes and place them in chucks. The cartons pass under two filling stations, each station removing alternate rows of tubes. After the last tubes have been removed from a carton at the second filler, the empty box makes a U-turn and returns to the staging area for re-shipment to the supplier for re-use.

On the rotary tube fillers an electric-eye system automatically turns and faces the tubes so printing will be in proper alignment at the crimper. As the tubes travel around the filler, they are automatically blown with air, vacuum cleaned, filled, crimped and coded.

Tubes then move to an automatic cartoner equipped with an electric eye that will trigger a device to flip up the carton's end tuck flap if the Crest box does not receive a special insert sheet or if a Gleem carton does not receive a filled tube.

The cartoned tubes then move to an automatic



Rigid inspection (foreground) is part of every P & G line. Completed bottles of Prell move off to lower right for replacement in shippers.

Filling cap hopper is almost the only manual supply operation in this plant. Nearly all other packaging supplies feed into the room on belts or slides from a "staging area" for each line.

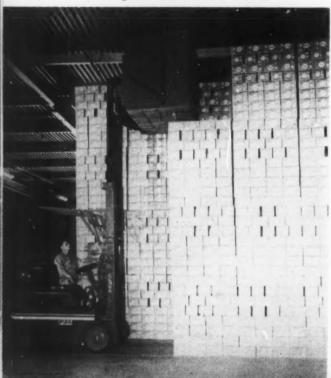




Other side of the wall is staging area from which supplies are fed through openings to six packaging lines and filled shipping cases are received back as in foreground. No pallets or lengthy conveyors are used. Note attendant at right feeding bundle of cartons through wall window. The same attendant removes finished cases from conveyor, stacks them on floor in prescribed pattern, then clamp truck moves palletless stack to warehouse area just a few yards away.

bundle wrapper and the bundled cartons make a U-turn to the case-packing station where an operator forms the shipper and packs the bundles. The case is automatically sealed and conveyed to the staging area. The third dentifrice line operates in much the same way except that the tubes are hand placed

Look! No pallets. Adoption of side-clamp lifttruck method enabled P & G to eliminate cost of 100,000 expendable paper pallets previously used each year. Trucks have two-ton capacity, lift to a 20-ft, height and handle 190 cases at a time.



on the filling line. Each tooth-paste line can handle three sizes and run either Gleem or Crest.

Bottling lines

The bottle-packing lines for shampoo—one for Liquid Prell and the other for Drene—also handle three sizes, are fully automatic and are electrically synchronized.

After unscrambling, the bottles are automatically cleaned, labeled, filled and capped. Girls re-pack the bottles in the same containers in which empties arrived from suppliers. The cases are automatically sealed and sent back to the staging area.

After bottles are fed into the single hair-wave line, the equipment automatically cleans, labels and fills each bottle and rolls on an aluminum cap. The home-permanent kits, which include bottles and foil pouches (filled in a separate room) require some hand-packing operations.

Handling methods

At the staging areas in the warehouse section, where the cases emerge from the packaging lines, there is a noticeable absence of pallets. Except in the handling of bags, some drums and other odd materials, the plant does not use pallets.

As the corrugated shippers from each line are fed back to the staging area, a supply man stacks them on the concrete floor in a prescribed pattern and to a prescribed height.

These pallet-less stacks are transferred to the shipping dock or to a warehouse area by a special type of clamp truck having two large hydraulic side clamps that are rubber faced to prevent load slippage. Each truck has a 4,000-lb, capacity, can lift to a height of 20 ft, and can exert clamp pressure variable from 0 to 1,500 lbs.

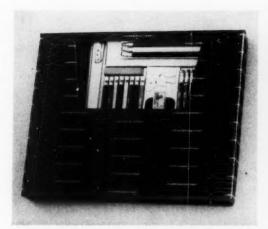
Since it is estimated that P & G had been using well over 100,000 expendable paper pallets a year, the savings from the new method are sizable.

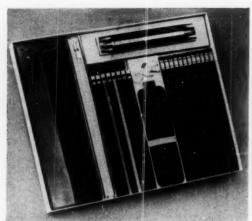
The plant is equipped with several service areas conveniently located in the building, including storage bins for packaging-machinery parts which have been found susceptible to breakdown through a systematic history of frequency of repairs. Such anticipation helps keep the Iowa City plant running at top efficiency.

Supplies and services: Major equipment suppliers for dentifrice and shampoo lines include: Arthur Colton Co., 3400 E. Lafayette Ave., Detroit 14, Mich.; R. A. Jones & Co., Inc., P. O. Box 485, Cincinnati 1, Ohio; Economic Machinery Co., Div. Geo. J. Meyer Mfg. Co., 60 Fremont St., Worcester 3, Mass.; The Karl Kiefer Machine Co., 919 Martin St., Cincinnati 2, Ohio; Pneumatic Scale Corp., Ltd., 65 Newport Ave., North Quincy 71, Mass.

Pencil strategy

Writing-supply firm wins coveted department-store markets within days after exhibiting dramatic display packaging to buyers at stationery show





Smart appearance of entire line is exemplified by de luxe set to sell for \$2.98. Base is of rigid set-up construction. Cover is of die-cut folding construction. Contents are arranged so that each item is visible through transparent window of polyester film for strength. Boxes had to be easy to open and reclose for personalizing the pencils and ball pens. Pen-point-shape design with scroll is used on all boxes to coordinate the entire family.

powerful example of what proper display packaging can do, almost overnight, is the success of a new line of pencil packages introduced only last May by the Pencil-Crafts Sales Co., of Lewisburg, Tenn.

Pencil-Crafts was a four-year-old "black sheep" subsidiary of Venus Pen & Pencil Corp., according to its sales manager, Robert S. Reiss, and had been losing money steadily until its packaging idea suddenly opened up the department-store market.

Within days after buyers saw the new packages at the New York Stationery Show in May, orders began coming in from all over the country—Jordan Marsh in Boston; Jordan Marsh in Miami; Titche Goettinger in Dallas; Joskes in San Antonio; The Outlet in Providence; Meier & Frank in Portland, Ore. And they are still coming in.

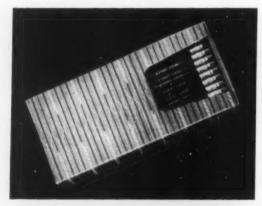
This is a story that proves what can be accom-

plished when a careful analysis is made of a company's market position and its packaging is put into the hands of a designer competent to meet the situation.

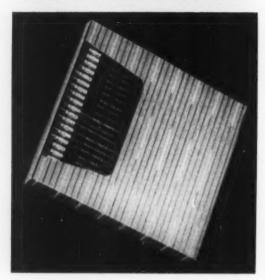
Pencil-Craft's basic sales asset is an automatic pencil-imprinting machine used to personalize pencils while the customer waits. The machine is loaned to stores without charge if they buy all their pencils for personalizing from Pencil-Crafts.

Principal outlets have been the variety chains—most of the big ones—to which Pencil-Crafts sells pencils in gross lots. Personalized in the store, they retail for 49 cents a dozen. Pencil-Crafts supplied no consumer packaging to these outlets. Some variety chain outlets, however, offer the consumer a package that will hold a dozen pencils for an additional charge of 10 cents.

Sales have been highly seasonal, primarily during



Color variety is achieved by different treatment of design on one- and twodozen pencil packages, which are printed with Kelly green background, maroon and gold lines, in contrast to cardinal red, black and gold on the set boxes. All have reverse-white accents.



machines are not automatic and therefore are slower to operate.

Pencil-Crafts felt its automatic machine had a decided advantage, but reasoned that the only way to win a more favorable competitive position was through packaging.

Mr. Reiss's first move was to visit Modern Packaging Readers' Service Department for suggestions as to sources of help. On the basis of this advice, he put the problem in the hands of a package designer, chosen because of his experience in related packaging fields.

Chief objective of the program was the planning of a range of boxes for personalized pencils and writing sets. Retail prices were to range from 69 cents for a dozen pencils up to \$2.98 for combinations, and packages were needed that would provide the following:

▶ Protect the product during the usual hazards of shipping, handling and display.

▶ Open and reclose easily for personalization at the point of sale and for re-use after purchase by the consumer.

Provide the visibility of contents and eye appeal essential to open display.

The result is a family of packages that attracts attention, stimulates impulse purchases and encourages gift sales. The packages combine rigid set-up-style bases with inserts of folding-box construction and tuck-carton covers with die-cut windows covered with polyester film for strength. This construction, it was found, provides economical production-line handling for the manufacturer as well as functional convenience.

Die-cut windows required constructions that would not weaken the containers or impair the appearance of a gift package. The packaging also challenged the imagination to arrange contents compactly, yet permit visibility of each item which it contained.

The designer planned die cuts in relatively similar

the back-to-school period and at Christmas. Most profitable markets for personalized pencils, however, are in the department stores and in mail-order houses, where until recently Pencil-Crafts did not sell.

These outlets had some serious competitive aspects.

Several companies were offering a personalizing machines without selling pencils. Pencil manufacturers were offering blank pencils without the machine. And one major competitor, dominating the department-store field for 20 years, offered not only an imprinting machine with the purchase of specified numbers of blank pencils, but pencils packaged in dozen and two-dozen units as well as in gift sets along with such items as pocket zipper pouch, sharpener, ruler, eraser, etc. This firm had considerably more machines available than Pencil-Crafts, but its

areas on all the packages to assure smart appearance whether contents are seen through the windows of the box covers or with covers removed.

An over-all repeat design coordinates all the packages. The theme, suitable for any age group, suggests a pencil or pen-point shape with a controlled calligraphic scroll inside every other one at regular intervals.

The design treatment was planned for use with a wide range of color combinations for greater display variety and to allow for possible additions to the line.

Colors for the set packages are a rich cardinal red for the background, with black and gold linear treatment and reverse-white scrolls. For the one- and two-dozen pencil boxes, the same design motif is used, but printed with a Kelly green background, maroon and gold lines, together with reverse-white scrolls.

Another part of the program was the designing of a point-of-sale shipper-display carton for 48 sets of three ball-point pens in a vinyl pocket pouch. Most important selling function of the display carton was to inform the shopper that each pouch contained three ball pens, one each with red, blue and green ink, sold for \$1, with name imprinted in gold on each "while you wait."

With an outside chipboard sleeve, this display carton provides an efficient shipping unit. Egg-crate-type partitioning holds the pouches tidy and upright and in good view for self selection. Partitioning also adds to the package strength. Base dimensions were kept compact to win dealer favor on store counters. A bright yellow background with red and black overprinting, plus reverse white, gives a strong poster effect to get the selling message across quickly.

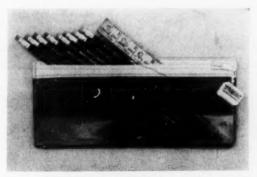
Acceptance of the packaging has been "more than we could have hoped for," says Mr. Reiss. "We are now definitely in the department-store market."

A competitive manufacturer of imprinting machines has been so impressed with the new packaging that he has been displaying Pencil-Crafts packages at shows right along with his machines. The new packages are being listed in many Christmas catalogs and the company reports that it is selling substantial orders to gift shops to sell without personalizing.

Supplies and services: Design by Gilbert Banever & Associates, 101 Park Ave., New York 17. Boxes by The Bradley & Gilbert Co., 650 S. Seventh Ave., Louisville 1, Ky., using Mylar polyester film by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. Vinyl pouches by A. G. Mayer, Inc., 203 E. 18 St., New York. Giant pencil case by Linton Pencil Co., Lewisburg, Tenn., using Du Pont polystyrene.



Display shipper promotes vinyl pocket pouches containing three ball pens—one each with red, blue and green ink—which can be imprinted with name in gold on each.



Handy zipper pouch for school assortment has pencil sharpener attached to slide fastener.



Novelty package is made like giant pencil of polystyrene plastic—popular item for children.









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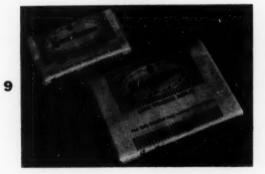
- 1 Printed polyethylene bags have taken the place of assorted wrappings formerly used by Westinghouse Electric Corp.'s Electric Appliance Service Div. to return repaired portable electrical appliances to consumers. One size, 10 by 6 by 18 in., fits the entire range of portable appliances, including toasters, irons, coffee makers, fry pans, etc. The flexographic-printed orange and blue bag, re-usable in the home, is a constant reminder of Westinghouse products. Bag, The Dobeckmun Co., Cleveland, Ohio.
- 2 New four-can carriers to promote multi-unit sales of Shurfine fruits and vegetables by member retailers of Central Retailer-Owned Grocers, Inc., require no machinery for setup. They are hand filled by retailstore personnel and will be introduced this fall by 8,500 GROG, Inc., retail grocery stores. "Saver Pak" carrier, Michigan Carton Co., Battle Creek, Mich.
- 3 A six-color-printed aluminum foil overwrap has been selected to introduce Seabrook Farms' new quick-frozen whole green beans. This marks the first use of aluminum foil packaging for Seabrook Farms products. Design, Mel Richman, Inc., Philadelphia, Pa. Wrap, Reynolds Metals Co., Louisville, Ky.
- 4 A crayon sharpener is built right into the new folding box for Binney & Smith, Inc.'s Crayola crayons. The design features a banner, promoting the sharpener, that extends from the front to the back panel of the box, where the sharpener is located. Box, National Folding Box Div., Federal Paper Board Co., Inc., Bogota, N. J.
- 5 Five-color photography portraying a formal dinner setting, reproduced in fine-line screen on this carton for Hudson Pulp & Paper Corp.'s new luxury paper damask dinner napkins, is aimed to encourage the use of the carton on the dinner table. On one face, for store display, the Hudson name is superimposed on the photograph; on the other, for the home, there is no promotion or copy. Carton, The Lord Baltimore Press, Inc., Baltimore, Md.











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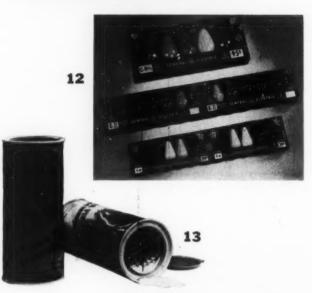


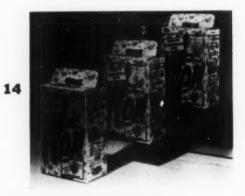
- 6 Cochran Foil Co. is now distributing its Chef-Foil line of household aluminum wrap in multicolor-printed, aluminum-foil-laminated cartons. Basic color scheme on all cartons is red, white, blue and silver. The 25-ft. roll is identified by a predominantly blue design, while red identifies the larger-sized 75-ft. roll of foil. Carton, The Bradley & Gilbert Co., Louisville, Ky.
- 7 General Mills' package for new Radiant Crisp Wheaties places emphasis on the product—not premium offers or cut-outs. Front panel stresses that Radiant Crisp Wheaties are new. Back panel is dominated by a striking color picture of the cereal ready to eat and copy, "crisp to the bottom of the bowl."
- 8 A large, family-sized No. 2½ can for C. H. Musselman Co.'s apple sauce, illustrated here with the No. 303 size, was introduced when market research indicated housewives were buying smaller cans in multiple units. The packer reports "excellent" results so far. Can, American Can Co., New York. Label, Piedmont Label Co., Bedford, Va.
- S Neat, modern design of these polyethylene wraps printed in midnight blue and aqua for Swarthmore sheets and pillow cases made by City Stores Mercantile Co., Inc., gives prominence to the trade name in an oval surrounded by stripes. Copy is confined to essential descriptive data. Design, Gilbert Snyder, New York. Wraps, Package Products Co., Inc., Charlotte, N. C.
- A family package series of stretch socks, stressing the "Epic" brand name, has been introduced by Rudin & Roth exclusively for supermarket sale. Colorfully printed one-pair and two-pair bags feature appropriate cartoon figures to identify socks for men, boys and girls. Bags, Wrapture, Inc., Flushing, N. Y., using Visqueen polyethylene.
- A continuing-panel design on the carton for Revlon's Persian Melon nail enamel achieves a bold, double-poster effect that gives exceptional display advantage to a small package. The full-color design of a glam-

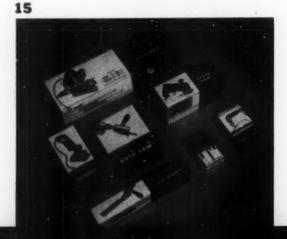
orous model resting on a leopard skin conveys an Oriental theme, tying in with the product name. Design, Neshitt Associates, New York. Cartons, F. N. Burt Co., Inc., Buffalo, N. Y.

- 12 General Electric Co.'s new Christmas lamp package combines maximum display and sales appeal with economy of production costs. Its construction allows testing the 10 lamps as they are packed in the carton. At the final packing operation, the pack is separated into five-lamp cartons—five being the average sales unit. Carton, The Ohio Boxboard Co., Rittman, Ohio.
- A dramatic flame design in red and yellow against a black background for Edconco, Inc.'s Swish Powder Fire Extinguisher immediately identifies the product. The lithographed metal can has a polyethylene closure of patented construction. Design, Peter Quay Yang Associates, Inc., New York. Can, George D. Ellis & Sons, Inc., Philadelphia, Pa. Closure, Wilpet Tool & Mfg.. Co., Kearny, N. J.
- 14 Convenience is the keynote of this new corrugated carry-home box for Won detergent, produced for Jewel Tea Co. The unit holds 7½ lbs. of detergent and has a tear tab for easy opening. Printing is in four colors and the inside of the box is glassine lined for product protection. Box, Hinde & Dauch, Sandusky, Ohio.
- A coordinated family design has been adopted to build consumer recognition for Sears, Roebuck & Co.'s Craftsman line of power-tool attachments. Product names are in bold, legible type; halftone photographic reproductions of each tool give instant product identity. Top of the two-piece box is of paperboard, while the box base is made of corrugated. Color scheme is blue and yellow, an effective combination for display purposes. Design, Fred M. Gore, Dallas, Tex. Box cover, Magnolia Carton Co., Houston, Tex.
- 16 Three forms of pink glassine are used for interior protection of Nabisco's new "Deluxe Assortment" of









cookies against grease, moisture and breakage. Waxed glassine liner prevents boxboard from staining; fluted glassine cups prevent product breakage and grease strike-through; a sheet of corrugated glassine covering the cookies gives shock protection. Package design, Raymond Loewy Associates, New York.

- 17 Triple indentations in the bottom of this lithographed metal container for R. M. Hollingshead Corp.'s new Hi-Shine Auto Beauty Creme give the retailer complete flexibility in stacking for display. Mass displays may be built in supermarket outlets and the containers are equally practical and effective for service-station display conditions. After successful markets, the product is now being sold nationally.
- 18 Both front and back panels of this new overwrap for California Packing Corp.'s Del Monte brand raisins carry full-color, appetite-appeal illustrations which extend around the sides of the carton. Front panel illustrates raw raisins; back panel shows product used in cakes, puddings and cookies, where raisins are reported to have the greatest frequency of use. Wrap, Western-Waxide Div., Crown Zellerbach Corp., San Francisco.
- 19 Distinctive structural shape of this carry carton for The Wooster Brush Co.'s Ejecto-Matic Paint Roller Kit creates effective patterns when cartons are stacked for mass display. The handle is aimed at impulse sales. Front-panel windows give full product visibility and folding platform at the base of panel holds paint-roller handle securely in place. Rearpanel gives use instructions. Surface design, Smith-Scherr-McDermott Designers, Akron, Ohio. Carton, Container Corp. of America, Chicago.
- 20 Reportedly the first to adopt a metal aerosol container for spray deodorant is Colgate-Palmolive Co., for its Veto Mist. Can, Continental Can Co., New York. Valve and cellulose acetate cap, Precision Valve Corp., Yonkers, N. Y. Custom packager, G. Barr & Co., Chicago.











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BAYER

BAYER'S squeeze

The creator of aspirin makes a bid for another major role in cold remedies with a nasal spray packaged in tiny color-coded squeeze bottles on an advanced, mechanized line



Color-coded bottles for each member of the family are designed to encourage individual, sanitary use of squeeze-type nasal sprays.



he Bayer squeeze-to-use nasal spray being introduced this month by National Brands Division of Sterling Drug, Inc., is significant on four counts: It makes use of the economical extruded-body squeeze bottle in a miniature form; it is filled and closed on a completely mechanized high-speed line that includes a new rotary heat-sealing unit capable of handling 180 bottom-seal bottles per minute; it is the first product other than aspirin ever to be marketed by the 57-year-old company that originated aspirin, and its merchandising strategy is built around the idea of color coding to "personalize" the applicator and encourage the purchase of one for each member of the family.

With the economy of its package, the Bayer nasal spray is expected to retail for about half the price of most competitive sprays and, with this product to relieve nasal congestion and the old stand-by aspirin to kill pain, the company is in a position to dominate the \$250-million market for cold remedies. The new product will also be a boon to hay-fever sufferers.

How packaging has been used to give the new product personal convenience appeal as well as to fit it to the requirements of self selection in selling provides a story demonstrating the value of coordinating package design with the merchandising plans in the launching of a new product.

The market for nasal sprays alone is enormous—and still growing. Last year, \$13,900,000 worth of nasal sprays were sold, up \$1,450,000 from 1955, according to *Drug Topics*. So many of these products are packaged in polyethylene squeeze bottles, usually holding about 15 cc. and retailing for about \$1, that nasal sprays are now reputed to be the biggest users of these containers, taking an estimated 55 to 60 million per year.

To break into the established market for nasal sprays and win consumer acceptance, the company realized that something more than its famous trademark and the statement that its product contains neo-synephrine was needed. Since the conventional package of nasal spray is seldom used up by one

spray



Convenient to use and to carry in pocket or purse, squeeze bottle of \(^{\frac{1}{2}}\). in. diameter is 3\(^{\frac{1}{2}}\) in. high, holds 7\(^{\frac{1}{2}}\) cc. of new Bayer nasalspray solution—enough for 140 average applications. Economy of package enables retail price of about half that of competitors.

person in the course of a cold, the idea of merchandising smaller containers at a lower price took form.

This idea was made economically feasible by use of the cylindrical polyethylene bottle with integral nasal tip, which is supplied with open base for easy filling and sealing on machines capable of handling 180 bottles per minute. As a result, the company has been able to offer a 7½-cc. bottle of nasal spray (enough for 140 average applications) at a retail price of only 59 cents, or two bottles for 98 cents.

To promote further the use of each container by only one person—a logical sanitary measure—the opaque white bottles are varied, with caps and imprinted labels colored blue, green or brown—"a color for each member of the family."

A secondary packaging item of interest is the use of a paperboard boot designed for unusually easy set-up, which displays the bottle openly for self-selection merchandising and holds it securely to discourage pilferage. The pre-glued boot folds flat for shipment to the packaging plant, where it is set up in a simple jig with three hand movements to unfold it and to insert a die-cut tab in the back panel into a slot in the front panel, locking it in shape.

A bottle is pushed cap first into a small opening in the boot "roof," then pressed against diecut, scored tabs on the front panel. The bottom tab snaps into the concave bottle bottom, pressing the head tightly into the boot roof and resisting withdrawal from the bottom as well.

Merchandising copy is printed by letterpress in aqua, red and black on white on the boot roof, front and bottom panels. It can be displayed standing up, stacked horizontally or hanging from a wire rack. Single- and double-unit boots are used, with bottles of different colors in the latter to maintain the personalized-use angle when they are purchased in multiple units.

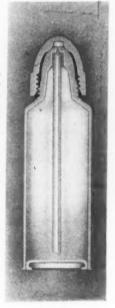
For counter display, a die-cut folding carton

Merchandising boot that holds bottles in open, yet discourages pilferage, can be displayed standing up, stacked horizontally or hanging from wire rack. Shipped pre-glued and folded flat, boot sets up by simply sliding lock tab from back panel into slot in front. Die-cut, scored tabs support bottle and press cap into boot-roof opening to prevent easy withdrawal. Different-colored bottles are packed in double-unit boots. Identically constructed single-unit boot sells for 59 cents.



PHOTOS COURTEST BRADLET CONTAINER CORP

Cross-section view shows how bottom-fill polyethylene squeeze bottle saves packaging labor. Bottles are supplied with the molded nasal-tip-bottle head pre-welded to the extruded body, an internal spray tube firmly seated in the orifice well and a molded urea cap screwed on tightly. Only the bottom disk (with embossed code number to identify the product batch) is applied by the packager.





Open-bottom bottles from hoppers are set head down in anodized aluminum holders by gloved operators for filling and sealing on the 24ft,-long packaging line at the Bayer plant.

holds rows of single- and double-unit boots, six of each, packed standing up. The lid lifts up to display bottles in the front-row boots as well as copy printed on the slanted roofs of the other boots. It folds back to form a riser featuring reproductions of a father, mother and son each using his own nasal spray.

The nasal spray bottle is $\frac{7}{8}$ in. in diameter, stands $\frac{3}{8}$ in, high and has side walls 0.032 in. thick. A bullet-nosed tip with a smooth orifice at the center is molded integrally with the head of the bottle and welded to the extruded body. Dry offset printing reproduces the Bayer label and instructions for use with excellent definition, even for the four-point typography.

In the manufacturing plant, automatic machines insert spray tubes extruded of polyethylene into a well in the nasal tip and also screw on molded urea plastic caps of the same color as the bottle decoration. This saves considerable time in the packaging operation. Bottle bottoms molded of polyethylene are shaped like tiny shallow saucers and have code numbers molded on the exposed side. These numbers are used by the packager to identify the product batch.

Throughout the manufacturing operation, these containers are handled and stored in new polyethylene film bags. For shipment to the packager, 2,250 bottles are placed head up in a tray and 10 trays are packed in a corrugated carton. Flaps of the shipper are taped to prevent entry of dust and dirt.

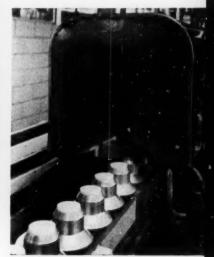
The new Bayer nasal spray is packaged at Sterling's Myerstown, Pa., plant. High-speed automatic filling and heat-sealing equipment connected by a 24-ft. endless conveyor with manual stations on both sides of the line was installed for the job. The installation is one of the most advanced yet seen in squeeze-bottle packaging and the high-speed handling of these miniature bottles is especially noteworthy.

From two large glass-front hoppers between the two conveyor lanes, capped bottles are placed head down in metal holders by four gloved operators. Holders are made of anodized aluminum to prevent discoloration of the bottles. The loaded holders travel around a U-turn at the end of the conveyor to a rotary automatic filling machine with 18 valves. Gravity feed fills the open-bottom bottles evenly, without need for drawing out air. Returned to the conveyor, holders pass before operators who position a saucer-shaped disk on the bottom of each filled bottle.

As the containers pass between parallel heating elements 6 ft. long, moving belts turn them on the conveyor to assure even heating. The holder moves from the heating unit into a new rotary sealing unit that can operate as fast as the automatic filler, pressing a spring-loaded metal disk against each weld to flatten and cool it. The filled, sealed bottle is then ejected automatically from the holder, which returns to the bottle-loading station on the conveyor. With slower, straight-line sealing units



Gravity filler with 18 valves automatically feeds spray solution through bottoms of the bottles in metal holders. Saucer-shaped bottom disks are positioned on bottles by hand (center) for heat-sealing operation (right). Operator on opposite side of line loads bottles into holders conveyed around U-bend to filler. With more operators, up to 180 bottles can be filled and sealed per minute.



Even heating of bottom disk and edge of bottle wall, which protrudes about ½ in. above metal holder, is achieved by spinning holder with moving belts as it travels between 6-ft.-long parallel heating elements at end of line.

the bottle had to be ejected from the holder by hand.

Eight operators now fill and seal 120 units per minute with this equipment; with more operators, it is reputedly capable of handling up to 180 units per minute.

Bottles of a single color are filled in a single run, then carried to stations on another line to be color mixed and loaded into the single- and double-unit merchandiser boots. Some of these are packed standing up in counter-display cartons holding six single- and six double-unit boots, and six of these cartons fit into a corrugated carton for shipment. Additional packs of 12 single-unit boots or six double ones are also available in chipboard containers.

The company reports enthusiastic reception of its new product and package by retailers. To introduce the first Bayer product other than aspirin, the company is launching a heavy schedule of magazine, television and radio advertising, stressing the personalized convenience and low cost achieved mainly through the use of imaginative packaging.

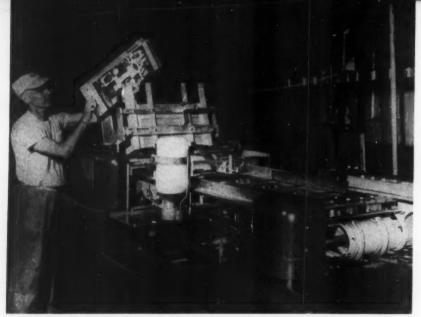
Supplies and services: Polyethylene bottles by Bradley Container Corp., a subsidiary of American Can Co., Thompson St., Maynard, Mass. Display-boot construction designed by The William Crane Co., 412 E. 55 St., New York 22; display boot and carton manufactured by The Nevins Co., 800 State Highway #3. Clifton, N.J. Bottle-filling and heat-sealing equipment by Horix Mfg. Co., Corliss Sta., Pittsburgh 4, Pa.



New rotary sealer presses spring-loaded metal disk against the bottom of bottle to flatten and cool the weld, then automatically ejects bottle from the holder, which is conveyed back to the bottle-loading station. Faster than straight-line units, this rotary sealer keeps up with the high-speed filler. This is the first use of this machine.



Counter display carton holds six single-unit and six double-unit boots. Folded container has a lock-flap bottom and die-cut and scored lid that folds back to form a riser illustrated to emphasize use of personal nasal-spray bottles by members of a family.



Blanks are loaded into hopper at discharge end and fed singly across the top of automatic multipacking machine to loading point, saving floor space. Glue from a polyethylene bottle is applied to end of the blank, becoming tacky as the blank is turned over at the end of the machine to fold over six-can group entering at right from conveyor.

Compact multipacker

New automatic high-speed glue cartoner saves floor space in Pabst plant by design that eliminates compression belts; a single operator can maintain inspection while loading blanks

ultipack cartons for canned and bottled goods, credited as a major sales stimulus in today's marketing picture*, were created in the beginning by modifying conventional cartoning machines.

Surging demand for multiple-unit packages has resulted in changing this picture rapidly, calling for more economical cartons and efficient machines to load them. As a result, several of the large carton manufacturers have designed, or subsidized the design of, machines to handle their own types of multipack cartons.

Packagers have had a choice of blanks and machines that provide either a lock-tab seal or an adhesive seal.

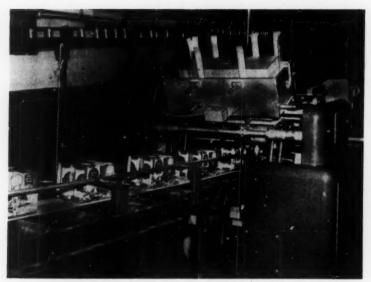
A new multipack cartoner produces a combination of both a lock and adhesive seal and completes these operations on highly compact equipment. One reason for the space economy results from the lock tabs holding the seam tight while the glue sets, eliminating the necessity for a long pressure belt.

This high-speed automatic cartoning machine is now in use at Pabst Brewing Co.'s Newark, N.J., plant to multipack 12-oz. flat-top beer cans. Versatile, compact and simple to operate, it can load up to 120 low-cost carrier cartons per minute.

Possibilities for multipacking products other than beer with this machine are suggested by the fact that it can handle cone-top as well as flat-top cans from $2\frac{5}{8}$ to $7\frac{3}{4}$ in, high and from $2\frac{1}{8}$ to $3\frac{3}{4}$ in, in diameter. The ease with which it can be adjusted for height permits quick change-over from 12- to 16-oz, cans.

Occupying only 29 sq. ft. of floor space at the Pabst plant, the machine is 88 in. long by 48 in. wide. This compactness is achieved by two factors of design: (1) instead of extending out over the incoming line of cans, the carton-blank hopper is at the discharge end of the machine and blanks are fed back to be folded down and around groups of cans at the entry point; (2) lock tabs hold the glued

^{*}See "Bright Outlook for Multipacks," Modern Packaging, Feb., 1957, p. 73.



Discharge end requires no long compression belt because lock tabs hold the bottom flaps of carton together as the glue dries. This arrangement saves much floor space. A single operator can inspect emerging cartons continuously while loading blanks into the hopper.

seam at the bottom of the multipack carton securely as the glue sets, eliminating the need for the package to be carried 25 ft. or so under pressure until the adhesive dries. Thus the machine has the compactness of a "no-glue" type of multipack, which also of course needs no compression belts, but with the added advantage, according to the machine manufacturer, of a positive glue seal.

Sealed cans travel to the multipacking machine on a two-lane conveyor belt that positions them in groups of three for six-pack cartoning.

The carton feeding system uses both suction cups and mechanical impellers to assure dependable feeding of blanks. The hopper holds 600 blanks and while one blank is being pulled from the stack, the remainder are held and raised to prevent double feed.

Glue fed from a large polyethylene plastic bottle which serves as the reservoir is applied in a ¼-in. strip along one edge of the blank as it travels upside down to the loading point and quickly becomes tacky enough to provide a fast, strong bond.

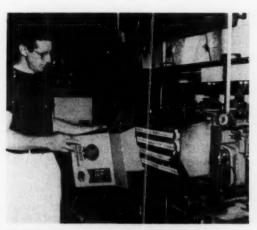
At the end of the machine, the carton blank is turned right side up and [Continued on page 255]

Supplies and services: Multipack cartoning machine engineered by Continental Can Co., Inc., 100 E. 42 St., New York 17, and manufactured for Continental by Ganz Bros., 53 Newbridge Rd., Bergenfield, N.J. "Jak-Et-Pak" printed carton blanks by Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., 530 Fifth Ave., New York 36. Casing machine by Standard-Knapp, Div. of Emhart Mfg. Co., Main St., Portland, Conn.

Locked and glued bottom seal (upper photo) gives carrier unusually strong base. Slots at top and bottom grip the can chimes securely, climinating need for end flaps. Side panels offer two types of design interest: appetite appeal on one side and an amusing sports cartoon collage on the other. Printing is four-color rotogravure.







For shipping, eight multipacks are grouped by casing unit and ejected into shipping carton.

OWENS-ILLINOIS ASSURES YOU A COMPLETE PACKAGING APPROACH



Co-ordinated Research

Pure research into fabrication of glass, packaging research into processing and handling methods in customer plants, market research into consumer attitudes. All add up to greater packaging value.



Engineered Design

At Owens-Illinois, your package's three needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.



The Right Container

There's an O-I container to meet your special needs: Duraglas containers; Libbey Safedge packing tumblers or premtums; Kimble Ampuls and Vials; and a variety of plastic containers.



The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.



Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse... as well as on your own filling line and in transit.





Multiple-unit packs are a sure way to increased applesauce sales!



Duraglas containers for applesauce are available in sizes to meet your marketing needs . . . 8-oz., 15-oz., and 25-oz. capacities.

New applesauce survey uncovers two sales tips and a merchandising idea!

Sales Tip 1: The 1956 survey by the Home Makers Guild of America shows that people who buy applesauce prefer it in glass 2½ to 1!

Sales Tip 2: 32% of applesauce purchases are not planned, but are made on impulse. This vast market can be easily tapped by the unmatched impulse value of glass packaging.

The merchandising idea: 58% of

purchasers say they would buy applesauce in convenient multiple-unit packs—preferably of 4 units. In fact, right now about 3 out of 4 purchasers buy more than one unit at a time—so why not use a King-Size Duraglas container to fulfill family needs with greater convenience and economy?

Users prefer glass because it doesn't change the fresh, outdoor flavor of apples, nor add taste of its own. They like, too, the serving ease of Duraglas containers. Tops flip off quickly. The wide-mouth jar makes spooning out portions quick and neat. Snap! the cap is on again, and the container is airtight, flavorproof—to keep leftovers safe and show how much is left for another meal.

For information on Duraglas containers, get in touch with the Owens-Illinois office nearest you.

DURAGLAS CONTAINERS
AN (1) PRODUCT

Owens-Illinois

GENERAL OFFICES . TOLEDO 1, OHIO



Slide-off bubble

It meets the growing need for a transparent dome that can be removed from a card and replaced without damage where customers have the urge to handle the product

To open, turn over, hold bubble and slide card off from bottom. Note channels formed by turning back edges of plastic. This is back view of Lufkin rule, made by a Master affiliate.

even with complete visibility, not all products should be packaged so securely as to eliminate all handling by the shopper. Some things, such as instruments and appliances with working parts, require an actual examination and testing to clinch the sale and, if that isn't easily possible, the impulse to buy may be blocked.

The discovery of this principle has led to interesting variations¹ of the popular plastic skin or bubble pack, which customarily has been sealed to a backing card so that the package must be destroyed to get at the contents. In the new version, the plastic bubble is pre-formed to fit the product and is attached to the card only by close-fitting, turned-under flanges so that it may slide on and off. Thus the product may be removed, examined and replaced without damage to the package.

The advantage of this construction has been established in the case of the Master Rule Mfg. Co., Inc., Middletown, N. Y., makers of steel tape rules and folding wood rules.

1 See "Slide Track Thermoform." MODER'S PACKAGING, Jan., 1957, p. 130.

Master Rule was one of the first companies to use a printed card and a prefabricated, vacuum-formed plastic bubble for packaging steel tape rules.² When it was adopted, in combination with self-service merchandising techniques, sales went up 65%.

Later, the company turned to skin packaging and installed its own equipment for it. A thin sheet of clear acetate plastic was formed skin tight over a layout of several dozen rules, then cut to leave square flanges around each one. A printed paperboard card was laid over each unit with the skin-packed rule protruding through a die-cut opening and the end of the card was folded back and sealed with adhesive to close the package.

This package was said to cost 25% less than its predecessor in addition to eliminating inventory problems involved in keeping a supply of prefabricated domes on hand for various styles of rules.

However, when Master Rule recently re-examined its sales standing, it became evident that the sealed skin package left much to be desired. Prospective

² See "Agenum-Formed Plastics," Modern Packaging, Feb., 1954, p. 108.



On display, Master rules have extended header for display copy. Slideon bubble holds rule in lower half of card; extended edges at bottom of card keep bubble from sliding off. Note directions for opening at base of the "Tufboy" rule package.



Components of "Tufboy" pack, showing how acetate bubble is formed to the exact contours of metal rule (illustrated here with face side up).

purchasers wanted to test the rule before making a decision and this could only be achieved by tearing the package open. If the sale was not completed, the dealer was left with an unsalable package.

To remedy this merchandising problem, the company designed a modified version of its original printed card and prefabricated bubble package. Bubbles are formed of clear acetate to hold various rules in the Master line and also the Executive Thinline rule produced by the parent firm, The Lufkin Rule Co., Sagninaw, Mich. The idea for this package was conceived by Clarance Nykwest, plant superintendent at Master Rule.

Two opposing sides of the square-flanged bubble are turned back on a narrow edge, forming channels for the printed display card that serves as the back of the package. Bottom edges of the card are extended slightly to keep the rule-loaded bubble from slipping off in that direction. A die-cut slot at the top of the card fits display hooks of various shapes.

This package gives the interested shopper ready access to the rule without danger of damage to the package. As the display card points out, it opens easily by turning the card over, holding the bubble and drawing out the card until the rule is exposed. It closes just as easily.

Functional simplicity also makes the new package less costly to load at the factory. With the former package, which involved vacuum forming, die cutting and securing the skin-packed rule in the sheath with adhesive, one man could handle about 700 units a day. Supplied with prefabricated slide-on bubbles and printed cards, one man can package 3,000 rules a day, according to the company.

While the skin package was in use, about 50% of the rules were still shipped in individual folding cartons to fill dealer requests. Master Rule reports that 90% of its rules are now demanded in the slideoff bubble because it has proved so advantageous.

Supplies and services: "Slidon Dome" manufactured by Plastic Artisans, Inc., Dock St. & Martin Pl., Port Chester, N. Y., using Gelanese acetate. Printed card by Newburgh Paper Box Co., Inc., 80-88 S. Colden St., Newburgh, N. Y.

Background for baubles

Unusually large product display space is provided by a floor stand designed for merchandising Shiny Brite Christmas-tree ornaments, made by Max Eckhardt & Sons, New York. The stand is made of a new corrugated board with a fine-surface bleached white outer liner printed in Christmas green and red colors by letterpress. Constructed to display several dozen cartons of the glittering ornaments in easy-toreach stacks, the floor stand rests on crossed partitions in the base, said to be capable of supporting considerable weight. Side panels of the main section rise diagonally to protect cartoned products on both sides. In place of the usual merchandising copy, two cartons of ornaments are set into a die-cut riser extending above the main section. Copy on the stand is minimized to help the ornaments merchandise themselves in the bright-colored stand. The economy of the new board is said to promote wider distribution of these floor stands.

Supplies and services: Corrugated floor stand by Continental Can Co., Inc., Gair Fibre Drum & Corrugated Box Div., 530 Fifth Ave., New York 36.



Display Gallery

Paperboard money saver

A handsome but much less costly replica of the permanent wooden counter display designed to promote gift purchases of Little Lady toiletries has been adopted by Helene Pessl, Inc., for distribution to an expected 2,000 new merchandising outlets.

Identical in both size and appearance to a permanent unit made of wood, the new counter-display cabinet costs less than 25% as much as wood and is easier to distribute because it can be shipped knocked down with the merchandise.

Made of lithographed paperboard, the new cabinet has a gold-finish filigree metal headband and gold-finish wire risers to support the shelves. It is 21 in. wide, 25 in. high and 7 in. deep.

Size of the new display is ample to exhibit a representative assortment of the Little Lady line, gift packaged to appeal to the growing-up instincts of little ladies from three to 12 years old.

Supplies and services: Counter display by Einson-Freeman Co., Inc., Starr & Borden Aves., Long Island City 1, N. Y.



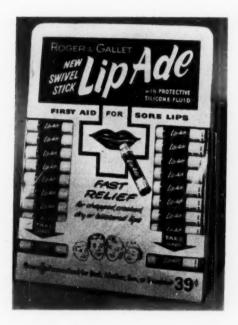
Lip-cream dispenser

Compact new counter-display units dispense Roger & Gallet's Lip Ade packaged in metal tubes that have been redesigned for merchandising as "first aid for sore lips."

The paperboard display is 12 in. high, 9 in. wide and about \(^3\)4 in. deep, supported by a die-cut, scored easel that folds out from the back panel. Gravity fed to dispensing slots at the bottom, the tubes are visible through vertical slots at each side of the 2-doz.-tube unit and at one side of the 1-doz-tube unit. \(^2\)

Original green and white colors used in packaging this 87-year-old product are retained for identification on redesigned tubes and supplemented by clear red on display units. The new tube is \(^{3}\)4 in. longer and slightly larger in diameter than its predecessor, has a swivel stick for easier application and is coded with a red, green or yellow cross printed on the cap for personal identification.

Supplies and services: Display-dispenser by Acme Folding Box Co., Inc., 149 E. 25 St., New York 10, Tubes by J. L. Clark Mig. Co., 2300 Sixth St., Rockford, Ill.



Display Gallery

Brick oven symbolizes baked-bean flavor

A brick baking oven is simulated by a new counter display unit adopted by Burnham & Morrill Co., Portland, Me., for B & M baked beans packaged in metal cans and glass jars.

The unit is designed to point up the importance of the company's brick-oven baking methods in achieving the flavor of the packaged product.

The display unit is made of corrugated board and printed with red and black on white to simulate real brick construction. It carries trade name and company slogan.

To symbolize the special baking process employed, a single jar or can of beans is displayed in an oven-like, cube-shaped recess at the center of the front section of the base of the display. A bin atop the "oven" accommodates an additional supply of cans and jars.

Shaped like a chimney for the oven, the back riser carries printed merchandising copy and has a space for marking in the retail price.

Supplies and services: Dispiny designed and manufactured by Hinde & Dauch, 407 Decatur St., Sandusky, Ohio.



A 50-year-old product changes both its form and its package to catch up with changing habits of use and to win a more favorable position on the food-store shelf

STEERO



Easy measurement of variable amounts is assured by the new granular product and package from which contents may be spooned as readily as soluble coffee. This convenience encourages wider use to add meat flavors to gravies, casseroles, etc.

s your product hiding its light under a bushel saleswise today because of (1) inconvenience of the product in use and (2) inconvenience of the package itself?

This question—which is pertinent to many established products—is brought to the fore by the radical product and package change just made for Steero, a bouillon concentrate of beef or other soup stocks, manufactured by American Kitchen Products Co., a division of S. Gumpert Co., Jersey City, N. J.

For 50 years Steero in cube form has been used to make a cup of hot broth or in recipes to add meat flavor to gravies, casserole dishes, etc. Each cube has been individually wrapped and packaged in units of five or 10 in tiny folding cartons, which in turn have been packed in dozen quantities in a folding display carton.

Currently the company is introducing "instant" bouillon, in granular form, in glass jars similar in size and shape to spice jars, from which the product may be spooned as easily as soluble coffee. This change—which might very well develop into a trend among several competitive products—has as its objectives:

To give Steero quicker solubility and to permit

GOES INSTANT

easy measurement of variable amounts of the product, whether for hot drink or use as a flavoring.

- To provide a larger-sized sales unit that will improve shelf display and eliminate display cartons.
- ▶ To establish a retail unit that can be priced to interest retailers in promoting it.
- ▶ To associate the product logically with a specific group of food-store items placed in a regular location.
- ▶ And to pave the way for an advertising campaign giving greater emphasis to the flavoring purposes of the product.

The new product and package, on the market since the end of July, are the results of an over-all study undertaken by the company, its advertising agency and an industrial design firm. The marketing objective is to induce shoppers not only to purchase more Steero bouillon, but to buy it more often because of a package that provides a more convenient unit to buy and to use.

The designers began their analysis in the supermarket. They found that bouillon, unlike most food products, was displayed in obscure locations in most stores. The package was not of the type that called for prominent display position and the shopper usually had to search for it. Because of the package's small size and low retail price, bouillon cubes were often thrown in among unrelated small

packages. In some stores they were near the soups; in others, near the spices. In many stores they were near the refrigerated cheese counter or above the refrigerated meat counter.

First step in the program was to uncover consumer preferences concerning the product and its existing packaging. Key information was obtained in a panel meeting of women conducted by Harold Cash of the marketing division of New York University. His findings were used as the basis for further study by Fact Finders, Inc., in which a selected group of housewives were given samples of the product in cube and granular form. After trying both, housewives appeared (1) overwhelmingly to favor the granular form and (2) by a large majority, to prefer it in a glass container.

Further questions pointed up the many uses for bouillon in convenient granule form, not only as a hot drink, but also to improve food flavors, to make better gravy, richer casseroles, savory stock, roasts and stews.

On the basis of these findings, the package designers selected a round glass jar of a shape associated with many spices as fitting the physical packaging requirements for an "instant" bouillon. Specifications required an opening large enough for a teaspoon and cylindrical sides to provide maximum labeling area. A shaker-top fitment was dis-





Glass jar, in contrast to tiny carton for product in cube form, improves shelf display, establishes retail unit that can be priced to interest retailers in promoting it, wins regular store location with spices. Greater label area accentuates the many uses for Steero Instant Bouillon.



NEW

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carded early, in that it tended to limit the product's use rather than to encourage it.

The brand name, Steero, is emphasized strongly on the label of the new package and, to speed this recognition, the trade name is now centered in an elliptical shape. Greater legibility is also the aim of a slight modification of serifs and the condensing of the characters. The elliptical shape is repeated at the bottom of the package, carrying the sell copy, "adds zest to food and gravies." Between these two elements the product name, "Instant Bouillon," stands out boldly and unmistakably.

The background color of all the new Steero labels is yellow, but the colors of the identifying ovals on the labels and the caps are changed to distinguish three different flavors—red for beef flavor, blue for chicken flavor and green for meatless vegetable bouillon. The same color identification is carried on the cube packages, which are continued.

To accentuate the many uses for this new Steero Instant Bouillon, a series of decorative food illustrations is reproduced across the back of the label. The words "richer gravy," "better flavor" are headlined and a cooking recipe is included. An illustration of a cup of steaming hot broth is featured in a white oval in the center of the recipe area to identify the new product for use as a hot bouillon soup.

The "five calories per cup" and high protein content are noted in reverse white lettering on the cap, circling a center white price spot.

According to Arthur L. Iger of American Kitchen Products Co., the time may come when the new granular product, because of its superior convenience, may supplant the cube form entirely.

The new Steero Instant Bouillon packages are being packed on an existing glass filling and closing line in the American Kitchen Products plant, Ontario, N. Y., but new lines will eventually have to be installed if sales increase as anticipated.

Supplies and services: Marketing analysis and design of label and cap by Associated Industrial Designers (formerly Robert 1. Goldberg Associates and E. Leonard Koppel), 284 Fifth Ave., New York 1. Metal cap by Ferdinand Gutmann & Co., 3611 14 Ave., Brooklyn 18. Glass container by Hazel-Atlas Glass Co., 15 & Jacob Sts., Wheeling, W. Va. Lithographed label by Muirson Label Co., Inc., 435 Stockton Ave., San Jose 26, Calif.

Butter pats packaged at 1,000 lbs. per hour

A major revolution in the serving of butter by restaurants, institutions and similar mass-feeding establishments may be under way as the result of a new high-speed unit-packaging operation in the Denver plant of Beatrice Foods Co,

The machine takes bulk butter, either directly from the churn or after it has been set up in prints, forms the butter into patties, deposits them between two ribbons of printed or plain cellophane, seals the film around the individual patties, scores the strips of patties so that the packets can be easily separated and, finally, boxes some $2\frac{1}{2}$ lbs. of the patties in serving trays, at rates between 600 and 1,000 lbs. per hour.

Distribution of the packets to restaurants in the Denver area represents only a dent in the annual 410-million-pound estimated butter consumption by restaurants, hotels, hospitals, schools, industrial lunch rooms, clubs, the Armed Forces, all of which can profit from use of the machine.

Besides sanitary advantages, the new butter pack reportedly offers a tastier product free from absorbed odors. For restaurants there should be a saving in the salvage of butter served but unused. Previously, this had to be thrown away to satisfy health authorities. Labor savings in handling accrue to both creameries and restaurants.

At Lowry Air Force Base in Denver, where the machine was under test during March, 1957, some 18,000 lbs. of butter were processed by the new method with reported savings in butter in excess of 25% in addition to substantial savings in manpower otherwise employed in processing butter patties.

Supplies and services: Machine by Butter-Pak, Inc., 3245 Larimer St., Denver 5, Colo.

Cleaner and tastier butter is provided by individual cellophane packets, served without waste. Serving tray holds 2½ lbs. of patties.



another

prestige
product
packaged
by

BURT

The new Twirl Carton manufactured for the Gillette Company.

F.N. Burt Company, Inc. Manufacturers of Small Set-up Boxes, Folding Cartons, Transparent Containers, 500-540 Seneca St., Buffalo, N.Y. Offices in Principal Cities or Write Direct. Canadian Div.: Dominion Paper Box Co., Ltd., 250 islington Ave. S., Toronto 18, Canada

TWIRE WAVING CREME

The STAG story



hat happens when a big packaging company decides it's time for change?

An instructive example is provided by Rexall Drug Co., Los Angeles, which in just nine months has conceived, developed and marketed a complete packaging change for its line of Stag men's toiletries. Although Rexall is one of the largest packagers in the drug and toiletries field, the principles and procedures are applicable to every packager, large or small.

First introduced some 25 years ago, the Stag line was beginning to show its age. Compared to competitors' packages and fragrances, the line was fast coming to be regarded by the public as a secondrate men's line. Moreover, addition and deletion of individual items through the years, coupled with frequent revisions in labeling and packaging, were gradually causing the Stag family of products to lose its uniformity of appearance. In addition, special offers, combination deals and the like were tending to break down the line's price structure.

To make the problem even more acute, many of Rexall's 11,500 franchised druggists throughout the U. S. and Canada were voicing dissatisfaction with the line as a whole. They realized, as did Rexall management, that the line was not complete and that it lacked modern styling and fragrance appeal. Though competitively priced, Stag products were

Rexall's brilliant new line of men's toiletries is no happenstance, but the result of a considered decision to throw out the old and bring in the new. This is how it was done

not moving off dealers' shelves fast enough. They could not be promoted enthusiastically because there was very little distinctive about the line, nothing that afforded a fresh selling approach. Salespeople could not conscientiously recommend them over competitive items,

This was the status of the Stag men's toiletries line in April, 1956, when, aware of its shortcomings, Rexall undertook the ambitious project of upgrading and completing the line.

The brand name "Stag" was to be retained because it was still ideal for a men's toiletries line. It readily identified each product as a men's item; it was short and easy to remember. The name itself afforded both an easy-to-illustrate stag symbol or trademark device and readily lent itself to catchy promotional slogans and headlines.

By keeping the brand name, Rexall also expected to take advantage of a considerable degree of brand loyalty built up through a quarter-century of promotion. Less "spadework" would be required in introducing a line that retained the recognition value and acceptance of the Stag name.

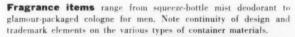
Developing a line new in everything but name, however, was just one step short of starting from scratch. New containers would be required, together with completely restyled labels and cartons. In addition, Rexall's laboratories would have to come up with a distinctive fragrance appealing to women as well as men—one that not only would help the line sell on sight, but on "sniff."

Research and development

Containers were the first order of business for Rexall's packaging men. Since six of the line's 13 items would be packaged in glass, the biggestselling glass-packaged item, Stag After Shave Lotion, was selected for initial design work.

In order to develop the best glass-bottle design, several of the nation's largest bottle manufacturers were called in to meet with Packaging Coordinator John A. Walls. Each reviewed the results of Rexall's preliminary research on bottle molds and submitted specifications and dummies. From the many excellent bottle designs submitted, the new 5-oz. bottle was selected.

After reviewing and revising plastic mock-ups of this sample, Rexall ordered cold-mold samples for use in the actual label-design program. The bottle supplier was then instructed to proceed with









Tubes for shave cream maintain the dignified simplicity of new line. Reversal of color scheme distinguishes the lather and the brushless types.

mock-ups for 10-oz., 5-oz. and 3-oz. bottles, plus a ½-oz. size for customer sampling. Larger sizes for some items were to be introduced later.

Similar procedure was followed in selecting the tubes, the metal and plastic cans and the caps for the remaining items in the line.

Once the right bottle design had been selected, Rexall designers and outside associates began working out various labeling approaches. During a three-month period, more than 200 different glass-bottle label designs were prepared and submitted to management. The end result was an applied, one-color label. Sample color-applied labels were made up for opinion testing, after which a gold cap and label color scheme was established for the bottle line (due to green liquid being predominant).

With a basic color scheme of green, white and gold established, adapting the basic design and color to the rest of the labels in the line was a simple matter.

The After-Shave Lotion, Electric Pre-Shave Lo-

Hair preparations are uniformly packaged in gold-labeled, gold-capped bottles specially designed for the new Stag line.



tion, Cologne, Vita-Hair Tonic and Deluxe Hair Oil (all glass-packaged items) have gold caps with gold printing on the bottles. The two other glass-packed items—Cream Hair Tonic and Deodorant Stick—have green lettering on the glass rather than gold. The former has a gold cap, but the lid on the deodorant stick is green. The glass container for the Stag Deodorant Stick has an inner polyethylene shell which holds the stick. The polyethylene shell has a convenient "push-up" bottom.

The two aerosol items—Mist Deodorant and After-Shave Talcum, are predominantly green and have green caps. Labels are printed in white, with the stag and the oval surrounding the word "Stag" being printed in gold. The word "Stag" in the white ovals is done in green. The Brushless Shave Cream carton is green with white lettering, with two side panels predominantly white. The tube also is green. The Lather Shave Cream color scheme is just the reverse of that used on the Brushless Shave, the carton having green side panels and the tube being white. All cartons are embossed.

The cartons ultimately selected for the After-Shave, Cologne, Electric Pre-Shave and the two Shave Creams were designed with the male buyer in mind. At the same time their distinctive appearance makes them highly appealing to feminine shoppers as gift items.

While Rexall packaging men were developing a bottle mold, the company's Product Development Laboratories began work on evolving a new fragrance for the line. In all, about 120 suggested men's fragrances were prepared and researched. Via panel testing and a [Continued on page 251]

Supplies and services: Bottles by Carr-Lowrey Glass Co., 2201 Kloman St., Baltimore 30, Md. Closures by Owens-Illinois Glass Co., Toledo 1, Ohio. Collapsible metal tubes by The Sheffield Tube Corp., 170 Broad St., New London, Conn. Plastic bottles by Bradley Container Corp., subsidiary of American Can Co., Thompson St., Maynard, Mass, Polyethylene shell with "push-up" bottom for deodorant stick by Celluplastic Corp., 50 Ave. L, Newark 5, N.J. Cartons for lather and brushless shave creams by Superior Folding Box Co., 4170 Geraldine Ave., St. Louis, Mo.; other cartons by C. H. Forsman Co., 318 W. 39 St., New York 18. Labels for aerosol shave cream and aerosol spray deodorant by Sayers Printing Co., 9610 Manchester St., St. Louis, Mo. Aerosol cans for spray deodorant by Continental Can Co., 100 E. 42 St., New York; cover cap and valve by Aerosol Research Co., 743 Circle Ave., Forest Park, Ill. Aerosol cans and cover caps for shave cream by Crown Cork & Seal Co., Inc., Can Div., 9300 Ashton Rd., Philadelphia; valve by Precision Valve Corp., 700 Nepperhan Ave., Yonkers, N.Y. Color control by Color Harmony Manual, Container Corp. of America, 38 S. Dearborn St., Chicago.





How 3 types of packaging use BAKELITE Brand Plastics to

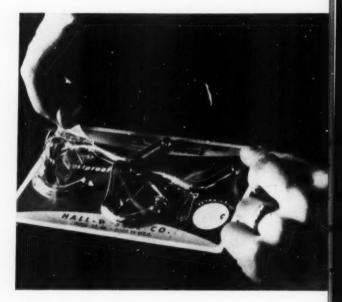
Deliver products factory-fresh

Polyethylene bottle. Many storage batteries are now shipped dry. The electrolyte is packaged separately in polyethylene bottles and added when the battery is sold—factory fresh. Light yet sturdy, this safe, convenient bottle is blow-molded by Plax Corporation from BAKELITE Brand Polyethylene. It is inert to chemicals—remains tough and flexible, and provides "no-return" convenience. Polyethylene bottles can be molded in a variety of colors and shapes. Sizes have reached as high as 13 gallons. Their low cost, light weight, and customer acceptance assure sales success for liquids and powders in consumer and industrial markets.

Deliver products factory-fresh

continued from preceding page





Skin packaging" helped double sales in self-service selling

That's the report of a leading hardware distributor to Wessel Hardware Corp., who manufacture and package these items. A protective covering of crystal-clear Krene Cast Vinyl Film (made by Bakelite Company) gives hardware added glamour and convenience for a standout display. At the same time the items are protected from soiling, handling, moisture, and corrosion. Since Krene is so strong and tough, the packages have a long storage and shelf life—the film keeps its gloss and clarity, won't dry out and crack. "Skin packaging" with Krene Film is ideal for all sorts of odd-shaped, difficult-to-package products. Why not put it to work on your problem packages?

Skin Packaging with KRENE Cast Vinyl Film is as easy as A. B. C.



A "Skin Packaging" starts with hardware items laid on card coated with BAKELITE Vinyl Resin.



B After film is positioned and heated, vacuum pulls it snugly against card and hardware.



C All items are packaged at once. Film protects and promotes for self-service sales.



In polyethylene-coated packages "our whole line showed sales increases"

That's the experience of G. N. Stevens, of Empire State Nut Co., Albany, N. Y. They package their peanuts and salted nuts in bags made of cellophane that features a protective coating of BAKELITE Brand Polyethylene. "We would definitely recommend these bags," he continues, "because of their clarity and durability, and the long shelf life they give our whole line of products." The polyethylene lining imparts no taste or odor, is resistant to oils and salt, and heat-seals to an airtight, moisture-proof closure. Find out how a coating of BAKELITE Brand Polyethylene on paper, film, or foil makes a better package for liquids, solids, or powders.



ASK YOUR SUPPLIER ABOUT PACKAGING MADE WITH

BAKELITE

BRAND

PLASTICS

UNION CARBIDE

Or, write to Bakelite Company for the names of suppliers who offer their clients distinguished service in plastic packaging.

BAKELITE COMPANY, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y.
The terms Bakelite, Krene, and Union Carbide and the Trefoil Symbol are registered trade-marks of UCC.



Automated chips

With a new system of feeding, weighing and bagging,
machines run without human attendance,
enabling Bon Ton Foods to turn out 35 million bags of potato chips a year

The potato-chip industry sets an example for other packagers in its persistent search for machinery specially adapted to the problems of its product—a lightweight and fragile item that must be accurately weighed and rapidly packaged to keep up with soaring consumer demand.

The latest forward step in this field may be seen at Bon Ton Foods, Inc., in York, Pa., where no less than 17 million pounds of potatoes are processed annually into 35 million bags of potato chips. Three of the plant's six packaging stations are made fully automatic by this first installation of a newly perfected type of weigher-packer that gives an average speed of 50 packages per minute per station.

Each of the automatic systems consists of three chief components—weigher, bag applicator and bag transfer—all integrated and timed to operate as a single unit. Also aiding the system's accuracy is an accessory shaker feed which evens the flow of the chips from the conveyor to the weigher-packer.

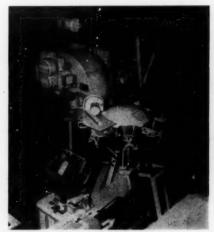
The system's in-feed vibrator further distributes the flow as the chips are deposited directly into a bucket suspended on the weighing element which operates on the principles of positive displacement and is triggered by electricity.

When the correct net weight has been received in the bucket, a rotary mechanism stops the flow of chips and empties the bucket instantly, sending the weighed charge down a chute into the bag beneath.

Bags pre-formed of cellophane are automatically positioned onto the spouts of a turret. The turret is timed to the weigher and revolves clockwise. After receiving the weighed charge, the filled bag is settled by vibration while still held on the turret.

The filled, settled bag is then released from the bag applicator into a transfer unit which snaps the top of the bag and automatically feeds it into the heat sealer.

Supplies and services: Weighing and filling systems (Bagmaster "H") by Wright Machinery Co., Div. of Sperry Rand Corp., Calvin & Holloway Sts., Durham, N. C. Heat sealers by Doughboy Industries, Inc., New Richmond, Wis.



Newly perfected machine for potato chips combines sensitive fill (from vibrator at top), automatic positioning of bags on fill spouts of revolving turret and automatic heat sealing (foreground) as filled bags leave the machine.

View of the line at Bon Ton. The first three stations from left use new, fully automated equipment, require no operators; remaining three semi-automatic stations handle larger sizes. Note overhead conveyors on which chips arrive from fryers. Shakers feed chips into 50-per-minute automatic machines; completed bags are deposited on conveyor for loading into shipping containers.



gives Tri-Sure protection to every gallon in drums and cans





*The "Tri-Sure" Trademark is a mark of reliability backed by over 35 years serving industry.

Quality is the byword at the D-X Sunray Oil Company where the finest crude oils are processed into outstanding lube oils. And this same adherence to quality is applied to packaging, for D-X Motor Oils are always protected by Tri-Sure* Closures—whether they are shipped in 55-gallon or 30-gallon drums, or 5-gallon cans.

The result is that D-X drums and cans create good will and maintain maximum product protection. Leakproof, tamperproof Tri-Sure Closures keep impurities *outside* every drum and the product *inside*. And Tri-Sure K-T Can Closures increase customer satisfaction by providing a strong, rigid spout which serves as a rest while pouring, and the large filling opening makes re-use easy.

More and more manufacturers, like D-X, are specifying Tri-Sure Closures, to give more *protection* and more *sell* to their complete line of 5 to 55-gallon shipping containers.

It will pay you, too, to give Tri-Sure protection to every drum and light container. Ask your supplier now, or write to us, for information on the extensive line of Tri-Sure Closures for drums, cans and pails.

AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y. CHICAGO, ILL. - LINDEN, N. J. - NILES, OHIO

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Tri-Sure S/A Indústria e Comércio, Sao Pauko, Brazil
American Flange & Manufacturing Co. Inc., Villawood, N. S.W., Australia
Compania Mexicana Tri-Sure S/A, Avenida No. 1 y Calle Piramide, S. Bartolo Naucalpan, E. de Mexico, Mexico
B. Van Leer N. V., Stadhouderskade 6, Amsterdam, Holland
Van Leer Industries, Ltd., Saymour House, 17 Waterloo Place, Pall Mall S. W. 1, London, England





Heat sterilization

in plastics

New data on the ability of various plastic films in bag form to resist the temperatures and pressures of autoclaving and to protect sterility of contents

By Erik Wallenberg* and Bertil Jarnhall†

One of the packaging weaknesses of the more familiar flexible plastics films is their low resistance to heat; generally they do not even withstand boiling temperature, Recently, however, some new materials have appeared which possess excellent resistance to heat (Figure 1). These materials over longer periods withstand temperatures considerably higher than 212 deg. F. and for shorter periods approximately 400 deg. F. Packaging materials have thus been developed which are heat sterilizable by both autoclaving and dry sterilization. Among such sterilizable materials, there may be mentioned polyethylene terephthalate (known in the United States as polyester film and, by trade name, as Mylar and Scotchpak), polyamides (nylon), low-pressure polyethylene and irradiated polyethylene.

It has been suggested that these sterilizable materials be used for packaging instruments and dressings, etc., which could then be sterilized in the sealed package and stored in sterile condition until their use.

On the other hand, it has been maintained that autoclaving of a sealed container would not sterilize the packaged article under customary conditions, since the package separates the article to be sterilized from the sterilizing agent, which in the autoclave is the live steam.

It has also been maintained that the sealed packages may burst because of the superpressure which arises in them during the period of heating. (See Figure 2.)

The object of our experiments was to elucidate these questions by investigating the prevailing pressure conditions, the inherent risk of bursting and whether sterility can be obtained in a sealed package under normal autoclaving conditions.

Reactions of 17 different plastics films to the

Figure 1. Influence of heat (320 deg. F., dry heat, 90 min.) on various plastic films. Of the three, only Sample 1, a polyamide (nylon) film, is unaffected; other two lave melted or charred.



^{*} Packaging Laboratory, AB Akerlund & Rausing, Lund, Sweden, † Packaging Laboratory, AB Astra, Sodertalje, Sweden.

Table 1: Heat resistance of various plastics films in respect to heat sterilizability

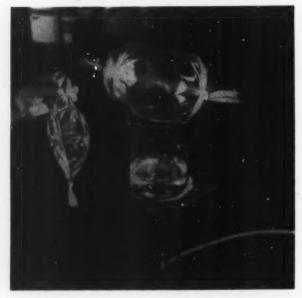
Trade name	Type of plastic	autocla 20 min	al withstands wing . at 244 deg. F. Remarks	dry steri	withstands lization at 320 deg. F. Remarks
i raae name		-			
Akulon	Superpolyamide, (nylon), Dutch made	Yes		Yes	Brown dis- coloration
Cellophane (plain)	Regenerated cellulose, Swedish made	Yes		No	Very brittle
Cellophane	Lacquered regenerated cellulose, Swedish				
(coated)	made	No	Delaminates	No	Very brittle
Cellulose acetate	Cellulose acetate, Swedish made	Yes		No	Very brittle
Cry-o-Vac	Saran resin blend, U.S. made	Yes	Shrinks and softens	No	Melts
Dezilon	Polyamide (nylon), German made	Yes		Yes	Brittle, brown discoloration
Koroseal	Polyvinyl chloride, U.S. made	Yes?	Softens	No	Decomposes
K-202	Saran-coated regenerated cellulose, British				
	made	No		No	Very brittle
Mylar	Polyethylene terephthalate (polyester),				
	U.S. made	Yes		Yes	
Polyethylene	Polyethylene, British made	No	Melts	No	Melts
Portex	Polyamide (nylon), British made	Yes		Yes	
Pliofilm	Rubber hydrochloride, British made	No	Softens, becomes milky	No	Melts
Polyvinyl chloride	Polyvinyl chloride, Swedish made	Yes		Yes?	Risk of melting
Rilsan	Superpolyamide (nylon), French made	Yes		Yes	Brittle, brown discoloration
Saran	Polyvinylidene chloride, U.S. made	Yes		No	Melts, de- composes
Supronvl	Polyamide (nylon), German made	No	Decomposes	No	Decomposes
Transotén	Polyethylene-coated regenerated cellulose,			No	Very brittle,
	Swedish made	No	Coating melts		coating melts

temperatures of steam and dry sterilization are summarized in Table I.

Test materials and methods

The materials tested by us included a superpolyamide (Akulon, made in Holland) in the form of

Figure 2. Expanding effect of enclosed air upon heating. Unheated bag (left) is actually flat.



a tube. Its weight was about 18 gm./sq.m. and its thickness about 0.014 mm. The material was not, however, very uniform.

For the tests, we prepared from this tube a number of bags with a width of about 55 mm. To obtain seals capable of withstanding the estimated stresses and free from microscopic leaks, knots were made at each end of the severed tube length. The distance between knots was about 130 mm.

In the test to establish the risk of bursting, a number of bags were heated to 212 deg. F. in dry air (dried with silica gel), while other bags were heated to the same temperature in steam. Before the test, the maximum volume of the packages had been computed (without stretching of the material). The test was carried out with the following amounts of enclosed air, stated in per cent of the maximum volume: 0, 15, 30, 50 and 75% for the dry conditions and 0, 10, 40, 60 and 70% for the moist conditions. These figures are only approximate.

A test was also made with compressed air and the pressure at the moment of bursting was recorded.

During the sterility examination, small filterpaper disks were used (Munktell OB) having a diameter of approximately 10 mm. These disks were inoculated by dipping into suspensions of bacteria. E. Coli and B. Subtilis were used as test organisms. The concentration of the suspensions was about 4 millions/ml. Each package contained five such dried disks. The test was carried out both with a number of bags almost completely without enclosed air and with another number of bags containing air at relative humidities of 0%, 25%, 50%, 75% and 100%.

The autoclaving was carried out at 248 deg. F. for 20 min. (The temperature momentarily rose to 266 deg. F.)

After the autoclaving, the test disks were transferred to tubes containing Difco AC-broth (10 ml. of broth, one disk per tube) which was incubated at 98.6 deg. F. for 48 hrs. (See Figure 3.) The usual bacteriological check was made of the virulence of the organisms.

Sealed-package autoclaving

When the heating of the autoclave is started, atmospheric pressure prevails both in the autoclave and in the sealed package. Because of the heating during the air-expulsion phase, the air-steam mixture in the autoclave expands. Initially, however, as the autoclave is open, there will be no increase in pressure. Also the air in the sealed package expands and inflates the package (under increase in pressure). During the heating, particularly at the beginning, one must reckon with a certain lag of the temperature in the sealed package, since the air therein cannot mix with the air in the autoclave. When the water has begun to boil, there usually exists a small superpressure and a temperature of some degrees above 212 deg. F. in the autoclave, because the steam generation is quicker than the escape through the valve.

When the valve is closed after expulsion of the air from the autoclave, the package has reached the stage of the greatest expansion with a maximum difference in pressure internally and externally of the package. Had the package been rigid instead of elastic, there would have been at this instant a superpressure within the package of at least 0.3

Table II: The total pressure in kg./sq.cm. in a *rigid*, sealed package (volume constant) at different temperatures and moisture contents of the enclosed air

	Rel	ative hui Moi	midity of sture co		ed air	Partial pressure
Temperature	0%	25%	50%	75%	100%	of steam
122 deg. F.	1.11	1.14	1.17	1.20	1.23	0.12
212 deg. F.	1.27	1.52	1.77	2.02	2.27	1.00
248 deg. F.	1.34	1.83	2.32	2.81	3.30	1.96
266 deg. F.	1.38	2.05	2.77	3.39	4.05	2.67



Figure 3. Sterility test. Broth in the three test tubes at right, containing paper disks taken from sterilized bags, is sterile. Three tubes at left, containing paper disks which have not been made sterile, show intensive growth of bacteria, indicating virulence of the test organism.

kg./sq.cm. (see Table II). Because of the increased volume of the package, this superpressure is not reached

After the valve has been closed, the pressure in the autoclave increases and so the package is compressed. During the cooling phase one must again reckon with a temperature lag in the package. causing an inner superpressure with subsequent expansion.

Burstings and corresponding ratios between the enclosed air volume and package surface were:

Amount of air enclosed in % of max. volume In dry air	Ratio of volume to surface	Bursting
	0	
0 15	1.1	_
30	2.5	-
50	4.2	
75	6.3	-
(Computed ratio at 100	% of air: 8.2.)	
In steam		

In steam		
0	0	Marrie .
10	1.4	MOVE .
40	3.1	+
60	4.8	+
70	5.5	+

(Computed ratio at 100% of air: 8.2.)
(On bursting, the volume had increased about five times.)

During the compressed-air test the packages burst at a pressure varying between 1.4 to 1.6 kg./ sq.cm. The sterility reading [Continued on page 233]

Fluorescent whiteners

An explanation and evaluation of the effect of new dye materials that make white papers 'whiter than white' by changing ultraviolet to visible light

By F. O. Sundstrom*



Fluorescent white dye being added to a laboratory beater which is an exact miniature of those used in paper mills. Treated pulp will later be checked for effectiveness of the application.

he whiteness of paperboard and paper used in packaging has been the subject of much study and work. Whiteness is of increasing importance in meeting today's standards of package appearance, both as a package color in itself and as a base for fine color printing.

A study of the literature on this subject shows that previous work has been primarily limited to discussion and evaluation of various types of whiteness and the response of people to whiteness.

This presentation will be primarily concerned with the ultra-high degree of whiteness now being obtained in packaging papers by a dyeing technique using new fluorescent whitening materials. It can be shown that "dyeing paper whiter than white" produces a whiteness and brightness which is unsurpassed or unattainable by any other means.

General principles

Since there are many grades of white papers made and utilized in the industry, no specific standard of whiteness which is applicable to all grades has been designated. However, the general principles of evaluating whiteness are generally acceptable to the paper industry. While personal preference is still a major factor in the selection of any specific shade of white, the final product is governed by the aggregate of the following factors:

- (a) The whiteness of the fibre.
- (b) The whiteness and quantity of the white pigment added.
 - (c) The cleanliness of the process water,
- (d) The quantity and brightness of tinting agent used.
- (e) The quantity and type of sizing material.
- (f) The use of fluorescent brightening agents.

By definition, white papers are those papers which are generally considered to be uncolored, but even this definition is not quite correct, since most white papers are tinted to some degree. There is a difference between dyeing white paper and dyeing paper white and to this distinction we now have added the phenomenon of dyeing paper whiter than white. Generally, bleached pulp in its natural state, while having a high level of brightness, is not white enough to produce the so-called high whites without some additional treatment. This usually means a tinting operation.

The four basic methods of producing white paper are:

- 1. Chemical bleaching.
- 2. The addition of white pigments.
- 3. The addition of bright tinting colors.
- 4. The addition of fluorescent whitening agents.

Chemical bleaching

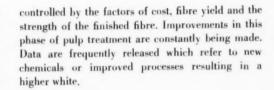
Chemical bleaching is the basic method of producing a fibre of sufficient cleanliness and bright-

^{**}Assistant Matager, Technical Service Laboratory, Dyes Dept., American Cyanamid Co., Round Brook, N. J.

ness to make a high bright white, Chemical bleaching is an essential part of pulp preparation rather than of paper making. It is carefully controlled, and conditions the pulp and prepares it for use in the manufacture of paper. Practically all of the basic fibres used in the industry are now available for and subjected to some form of bleaching. This applies not only to the chemical pulps which are used in the industry, but even mechanical pulp. Examples of such treatment are unbleached sulfite and bleached sulfite, unbleached kraft and bleached kraft, unbleached soda pulp, bleached soda pulp, unbleached cotton and bleached cotton, unbleached ground wood and bleached ground wood. It is recognized, of course, that very little, if any, of the unbleached cotton is utilized for the so-called white grades in the paper industry. The discussion also deals only with the virgin pulps as they are received by the paper manufacturer. It does not include any discussion of the de-inking or utilization of secondary pulps by the paper industry although a great many of these could also be subjected to bleaching treat-

In principle, bleaching is the removal or destruction of the natural coloring material which is present in the untreated pulps. Figure 1 illustrates the effect which is obtained by the bleaching process on sulfite pulp.

While there are a number of washing and preparatory steps, the basic bleaching agent used in the chemical fibre treatment is chlorine in some form. The mechanical pulp utilizes peroxide and sulfur dioxide, or hydrosulfite. The level of bleaching is





The addition of white pigments is only applicable in those cases where the pigments added are whiter and brighter than the fibre to which they are being added. This, of course, limits most of the improvement in the high whites and bleached grades to the use of titanium dioxide, since, aside from the use of increasing the ash content, most beater clays do not have sufficient brightness advantage over the bleached fibre to which they are being added to effect any material increase in brilliancy.

For example, bleached sulfite pulp has a brightness of 84.5, whereas a good grade of beater clay has a brightness of 83.0. The addition of any quantity of this clay would not improve the brightness of the fibre to which it is added, but on the contrary would tend to decrease the brightness. On the other hand, titanium dioxide has a brightness of 96.0, which is approximately 12 points higher than the bleached fibre to which it is added. Under these circumstances a definite improvement in whiteness and brightness would be obtained by the addition of titanium dioxide, where practically none would be obtained by the addition of this grade of clay. On the other hand, unbleached sulfite has a brightness of 55.0. This is materially less than the bright-

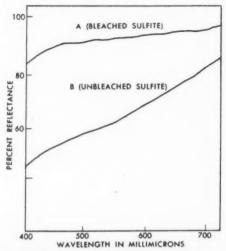
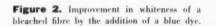
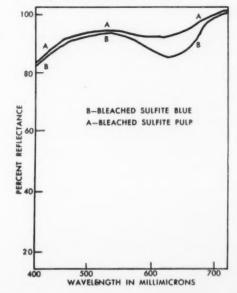


Figure 1. Improvement in whiteness and brightness by chemical bleaching.





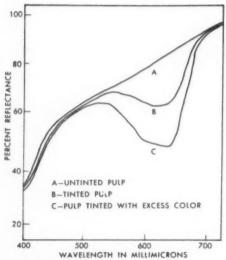


Figure 3. Improvement in whiteness of an unbleached fibre by tinting. Line C shows the effect of excess color to give a gray effect.

ness of the clay or titanium dioxide being added and, in this case, an improvement in whiteness can be obtained on the unbleached fibres by the addition of clay even though it is not effective on the higher whites utilizing the bleached fibre.

The following tabulation illustrates the various brightness values of the several pulps and fillers mentioned above:

Pulp	Brightnes at 459 Mu	
Bleached sulfite	84.5	
Bleached sulfate	80.5	
Bleached ground wood	60.3	
Unbleached sulfite	55.0	
Unbleached sulfate	25.0	
Unbleached ground wood	56.0	
Beater clay	83.0	
TiO ₁	96.0	

Tinting to greater whiteness

Probably the most common way of obtaining the desired shade of whiteness in any specific grade of paper is by the use of tinting agents. The word tinting is used to describe the addition of a small amount of dye or pigment which neutralizes the yellowness or natural tone of the fibre to which it is added and gives the desired neutral color which is more pleasing to the eye and is generally considered as an improvement in whiteness. The addition of any color can never increase the over-all reflectance or brightness. Suitable tinting agents tend to produce a more neutral shade and, by this neutrality, give an improved whiteness effect.

It is quite true that as the quantity of dye is increased, the result will invariably result in a de-

crease in whiteness. This is particularly true where the fibre is so yellow that the addition of coloring matter will only intensify the coloration and produce what can be called a gray. At this point the whiteness is decreased far more rapidly than it is increased by the use of the tinting colors.

Figures 2 and 3 illustrate the effect of

- (a) Adding the amount of blue color which would produce a satisfactory blue-white on a bleached fibre.
- (b) Adding the amount of blue dye which would produce a satisfactory white on unbleached fibre (low white) and the gray effect when excess color is added.

For tinting purposes, therefore, it is very important that the products utilized have in themselves a high degree of brilliancy so that when added to the fibre they produce a minimum of dulling or gravness. Depending upon the particular grade of white, the shade of white and the type of fibre which is being utilized, pigments such as ultramarine blue or the water-dispersible lakes of phosphotungstic acid and phosphomolybdic acid are very frequently used for the bleached grades of white. In the groundwood grades, in which there is more of a tendency toward economy and less requirement for lightfastness, many basic colors are utilized. The ethyl, crystal and methyl violets supplemented with or shaded with methylene blue, Victoria blue and rhodamines for a pink tone are most generally used. In the mixed-fibre group, due to working properties, the water-dispersible lakes and the so-called acid blues are frequently utilized to advantage.

Fluorescent whitening agents

The newest way to improve the whiteness is by the addition of the newer fluorescent whitening agents. These materials function by absorbing light in one wave length and re-emitting it in another.

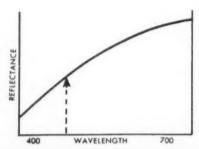


Figure 4. Definition of brightness of a white. Curve in graph above shows schematically the reflectance of a white paper. Dotted arrow indicates that brightness is evaluated as the reflectance at a wavelength of 456 millimicrons.

They absorb the UV portion of the light and re-emit some of this in the visible form. The effect is, of course, equivalent to the addition of a bright blue or violet.

Frequently the question is asked as to how the brilliancy of material of this nature compares with a numerical value represented by the whiteness and brightness of bleached fibres or white pigments. Actually, it is not possible to give a specific answer to this question, since fluorescent brighteners function in a range which is not measured by the usual instruments used for this purpose.

In terms of quantity and on a pound-for-pound basis, they are undoubtedly the most effective whitening agents used in the paper industry. Economically and visually, they are among the best and most effective whitening agents known. While a great number of fluorescent compounds are known, a relative few have practical value for paper-whitening purposes.

Using Calcofluor White PMS Concentrate as an example, the following properties are listed to illustrate the requirements necessary for a fluorescent brightener to be adaptable for paper whitening.

- 1. The fluorescent whitening agent must be colorless or nearly so.
 - 2. It should be very strongly fluorescent.
- 3. It should be substantive or at least retained by the cellulose fibre.
 - 4. It must be economical.
 - 5. It must be available in commercial quantities.
- It must be carefully standardized so that a reliable level of fluorescent activity can be available at all times.
- It must be stable throughout the paper-manufacturing process.
- It must have the desirable durability so that paper in its finished state will retain its whiteness and continue to be salable.

While it may not necessarily be an absolute requirement, most of the products on the market are water soluble. Good solubility is a very desirable property.

While the fluorescent brightening agents can in themselves induce whiteness and brightness, on a practical basis they are rarely utilized alone. Their primary function is to supplement and increase the whiteness and brightness of the other methods of producing white paper. The desirable mechanism would be to use a good bleached fibre, add the desired amounts of bright white pigment, tint to almost a degree of whiteness desired and then supplement this whiteness by the addition of a fluorescent brightening material.

As we have already indicated, the functioning of the fluorescent brightening materials is primarily



Forming test sheet of paper to be used in evaluating a Calcofluor white fluorescent dye.

concerned with the bleached cellulose fibres. They have little effectiveness on the unbleached cellulose fibres, although papers containing some unbleached groundwood can be improved by the use of relatively small amounts of this material. It is also quite true that in order to be effective, it is necessary to work in the blue-white range.

The addition of bright white pigment is not detrimental to the functioning of these products. Pigment is, however, equivalent to the addition of increased fibre or additional surface area, and additional brightening material must be added to compensate for this raw-material addition. While a variety of fluorescent brightening materials is available, the most popular and most effective ones are those which have the visual effect in the red-blue or violet range. The greener shades of blues, because of their neutrality, appear to be less effective in overcoming the yellowness of the natural pulp.

Evaluation of brightness

The General Electric Brightness Meter, or instruments of similar design, are widely used throughout the industry for the evaluation of paper. The readings from this instrument are called, quite properly, values of brightness, not whiteness. This instrument was primarily designed for, and is ideally suited for, the measurement of brightness of natural stock. It relies on the single measurement of reflectivity as a measure of brightness. This is indicated schematically in Figure 4 by a spectrophotometric curve. It works very well to evaluate the extent of chemical bleaching and to evaluate the effect of addition of white pigment, both of which induce brightness, and incidentally whiteness, primarily by increasing reflectivity. On the other hand, it is not designed for,

and is not suitable for, the measurement of whiteness induced by the addition of blue dye or by the addition of Calcofluor White. Both of these latter methods attain whiteness, at least in part, by the attainment of neutrality of reflected light, a characteristic which the General Electric Brightness Meter does not measure.

Evaluation of whiteness

Methods of evaluation of whiteness have been discussed frequently in the literature (2, 3, 5, 6, 7, 10). They depend fundamentally upon taking into consideration both the total reflectance and the departure from neutrality. This is indicated schematically in Figure 5.

The formula most commonly used in this country is that of Judd (6).

$$W = 1 - \Delta E_{w*} / \Delta E_{wb}$$
 (1)

where W= Whiteness Index; \triangle $E_{ws}=$ the color difference between a magnesium oxide white and the sample; \triangle $E_{wb}=$ the color difference between the magnesium oxide white and theoretical black.

When the color-difference formula proposed by Judd (4, 6) is solved for the color difference \triangle E between a specimen of paper and the ideal magnesium oxide white, the following equation results:

$$\Delta E = \begin{cases} [K (1.00 - Y\frac{1}{2})^{2} + \\ 7Y^{\frac{1}{2}}\sqrt{\alpha^{2} + \beta^{2} \cdot 10^{2}} 2 \end{cases}^{\frac{1}{2}}$$
(2)

A pure black sample would have values of Y=0, α and $\beta=0$. Substituting these values in the above equation gives \triangle E=K. The equation for whiteness which has been proposed by Judd then becomes

$$W = 1 - \Delta E/K$$
 (3)

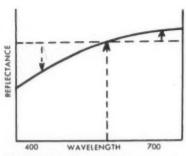


Figure 5. Definition of whiteness of a white. Solid curve represents schematically the reflectance curve of a white paper. Central dotted line indicates that total reflectance is one factor contributing to the measure of whiteness. The horizontal dotted line and the two dotted arrows that show deviation of the solid curve from the horizontal line indicate that neutrality of color is a second factor in the evaluation of whiteness.

In equations 2 and 3, K is a factor which adjusts for the relative importance of "reflectance" and "departure from neutrality" or "tint." If K is made very large, "reflectance" is made very important: whereas, if K is made very small, the degree of "tint" becomes very important in evaluating the deviation from white. There is a good chance that the value of K will vary from one individual to another depending upon how importantly he weighs these two factors. The value of K will also vary depending upon the viewing conditions under which the comparisons of whiteness are made. Judd has found that the eve can detect difference of "tint" quite easily even if the two specimens are separated. whereas difference of "reflectance" is much more easily seen if the samples are closely adjacent. Thus, if the specimens are held very close together in judging whiteness visually, differences in "reflectance" become relatively important and K must be assigned a large number in order to weight it properly.

Judd has found that if samples of white are judged some distance apart, K is 20. On the other hand, in the evaluation of some color differences where two samples are held very close together, the value of K may be as large as 120.

When 20 is substituted for K and certain mathematical simplifications are introduced as described by Hunter (1), Equation 3 becomes:

$$W = 1 - \left\{ \left[30\sqrt{\alpha^2 + \beta^2} \right]^2 + \left[\frac{(1.00 - Y)}{2} \right]^2 \right\}^{\frac{1}{4}} (4)$$

Selling (10) tested the above equation with some white paper specimens during his study of the measurement of whiteness and found that 70 was a better value for K than was the 20 originally proposed by Judd. This difference arises from the fact that when the observers were evaluating whiteness in the Selling investigation, they held the comparative specimens close together for their evaluation. If 70 is used, the numerical coefficient 30 in Equation 4 becomes 8.6. The exact value of the proximity factor K should be adjusted so as to get the best correlation with visual judgment of the color matcher whose work it is desired to predict by instrumental readings.

With the qualification that the value 30 is in some doubt and might better be 8.6, Formula 4 is recommended for calculation of whiteness from data obtained with the Hunter reflectometer.

Spectrophotometric data

The departure of the color of a specimen from pure white may be calculated with any of several small-color-difference [Continued on page 248]

[†]Numbers in parentheses identify References appended.



Olin Cellophane Sells New Ideas On Sight

Francis Blod, package designer, says: "Got a new cookie? A new fabric design? A new toy, snack, cup cake, or a new idea for selling meat? The instant ability of transparent cellophane packaging to 'demonstrate' new products makes it one of the best ways to overcome initial buyer resistance and win quick sales success economically.

"Olin Cellophane wins added impulse sales because of its attractive display of both product and label. Its natural sparkle, its assurance of freshness and cleanliness make it a natural choice for tray or box overwraps. And wherever desired, printed Olin Cellophane provides a package with vibrant, attention-compelling color."

Francis Blod reflects the latest thinking in modern package design. Why not let an Olin consultant help you or your designer package your new products

for instant consumer acceptance. Film Division, Olin Mathieson Chemical Corporation, 655 Madison Avenue, New York 21, N.Y.

CELLOPHANE

OLIN MATHIESON
CHEMICAL CORP.

A Packaging Decision Can Change the Course of a Business

This consultation service on packaging subjects is at your command. Samply address your questions to Technical Editor, Modern I ackaging, 5:75 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Improved composite can

Q: We use a fibre can with metal ends to package a granular cereal product. The fibre body is bleached kraft paperboard, the label is small, of printed paper, and the opening is a round, tight-fitting plug. We would like to redesign the package to improve its appearance and to ald some moistureproofness. How can this package be so improved?

A: Your present composite fibre can has no moisture protection and very little label area. I'ne simplest way to improve appearance and moistureproofness is to use an all-over label with an attractive appearance and printed design that would give moisture protection. Such a label can be applied by the fibre-can maker and should be weil overlapped on the side seal. The label should extend the full length of the fibre body and be applied before the metal ends are attached. The label stock can be a paper-backed a:uminum foil. Such a label can be printed with a multicolor design and will give high levels of moisture protection.

Another suitable label would be a lacquer-coated paper label. The lacquer would be one of several available moistureproof, decorative types and would be applied over the printing on a clay-coated label paper. This type of label can be printed by almost any printing process and its appearance and degree of moistureproofness would depend on the type and amount of lacquer applied.

Either the foil paper or the lacquered paper label will meet your requirement for improved decoration and moisture proofness of a composite fibre can.

High-density resins

Q: How does increasing the density of polyethylene-type resins affect protective qualities? The specific question concerns the resin in film form.
The protective qualities in which we are particularly interested are airproofness, moistureproofness and grease resistance.

A: The density of polyethylene resins is an important index of many properties.

However, the resin density alone is not the only factor that can influence film properties. If other variables are held within limits, then density is a reliable index of many important film properties.

A series of polyethylene films made from resins of similar molecular weight would cover a density range of from about 0.91 to 0.96. Above this density range, the watervapor transmission rate of a 1-mil film would go from 1.1 gm. per 100 sq. in. measured at 100 deg. F. and high humidity at 0.91 density, to 0.2 gm. at a density of 0.96. This is a very substantial increase in the moisture proofness of the film and is in general agreement with published data.

It is also probable that resins of greater than 0.96 density will not show substantially better moisture-proofness. The oxygen transmission values show a substantial improvement from density 0.91 to 0.96, but the magnitude of this change is much smaller than for water vapor. The grease resistance can also be expected to show general improvement, but the degree of improvement, but the degree of improvement can vary greatly and is dependent upon the oil or fatty material which is used as the testing medium.

There is ample evidence that increasing the density of a polyethylene resin will result in films of improved resistance to the permeation of water vapor and gases. However, there are other resin properties that must be considered in determining the effective packaging uses of polyethylene plastic films.

Eliminating freezer burn

Q: One of our products is an irregularly shaped meat cut which is quick frozen and sold through the usual frozen-food cabinets. The package is a waxed kraft folding carton with a printed and heatsealed foil paper overwrapper, We selected this package for its display appearance and to protect the product from freezer burn. Occasionally we have complaints of freezer burn and we do not understand the cause. since the package is supposed to prevent it. Can you tell us why we receive these complaints and how we can avoid them in the future?

A: Your package is extremely moistureproof and would protect normal products from freezer burn even after long periods of storage. Freezer burn is product desiccation resulting from moisture loss from the surface of the product. Usually this moisture loss is from the product surface through the package to the freezer coils in the cold room or cabinet walls. But your product is a special case because it is irregular in shape and thus there are large voids or cavities between the package and the product. When such cavities are large enough to allow air circulation between the product and the package walls, then moisture is removed from the product and deposited as ice crystals in the cavity. Under these conditions, the product loses moisture and shows freezer burn, but the over-all weight of the package does not show a loss.

The answer is to use a moistureproof conforming wrapper on the product. This type of wrapper can be a thin plastic film, a flexible wax paper or a metal foil, or a heatshrinkable plastic bag. Such a flexible, conforming and moistureproof product wrapper will prevent moisture loss from the product even though there are voids and cavities of any size within the package.

BRANDS WITH BANDS*

PACK MORE PUNCH AT POINT OF SALE



Du Pont "Cel-O-Seal"* Bands can play a powerful role in building brand preference for your glass packages

To be competitive today, glass packages must attract, inform, merchandise, protect—and sell! To help meet these demands, more and more glass packers are using decorative and protective Du Pont "Cel-O-Seal" cellulose bands to turn the bottle neck into a hard-selling feature of every package.

Personalized to meet individual needs, these snug-fitting neckband seals add impact at point of sale... permit you to highlight brand names, trademarks, sales messages and special promotions without major or costly packaging changes.

See for yourself how "Cel-O-Seal" bands can add flexibility—and protection—to your glass-packaging program. For information, write E, I, du Pont de Nemours & Co. (Inc.), "Cel-O-Seal" Bands, N-10414 (A), Wilmington 98, Del. "Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Company, Glass & Closure Div., Lancaster, Pa. (Bands may be hand- or machine-applied.)

DU PONT CEL-O-SEAL

BANDS



Better Things for Better Living . . . through Chemistry



Equipment and materials

New pressurized packing method developed

Pressurized cans for dispensing foods like barbecue sauces, catsup, mustard, salad dressing, cake frostings and syrups have been developed by Continental Can's Metal Research and Development Dept, Illustrated is the new pressurized



food can dispensing maple syrup. Technical difficulties heretofore confined the range of foods for pressure dispensing to foamed products such as whipped cream, dessert toppings, etc. Continental's experimentation with different gas mixtures, specially designed actuators and valve orifices now enables pressure dispensing of both oil-base and

water-base foods in either a spray or stream pattern with a minimum of aeration and with residual product at an acceptable minimum, the company claims. Valve manufacturers have been consulted concerning the new-type valves, according to Continental, and have indicated their willingness to make any special valve which has a large potential usage. Several contract packers have expressed their desire to enter the field, Continental reports, and one on the West Coast is installing equipment now which will be operating within a few weeks to custom pack food products. Continental's Customer Research facilities are available to provide guidance to customers on product formulation and container specifications. Continental Can Co., 100 E. 42 St., New York 17.

Machine for wrapless frozen-food cartons

Clybourn Machine's new Hot Melt Glu-Pac machine features hot sealing to eliminate the need for overwrapping frozen-food packs, together with automatic carton set-up and insertion (see "Wrapless, Linerless Cartons," Modern Packaging, 1957, p. 92). The new hot-melt seal, according to the company, is airtight at temperatures from minus 30 deg, to 160 deg. F. and has fibre tearing adhesion. The unit has a ¾ h.p. cooling unit with recirculating coolant, and a 5-ft. compression conveyor with cooled steel belts delivers completely sealed cartons. Packaging speed is reported at 40 to 60 per minute. The machine handles fixed carton sizes ranging from ¾ by 4¾ by 4¾ in, to 2¼ by 7½ by 9½ in, and is reported available with full adjustability for change-over within 20 to 30 minutes, Clybourn Machine Corp., 6479 N. Avondale Ave., Chicago 31.

High-accuracy check-weighing scale

A new Thayer automatic check-weighing scale that is reported to be accurate to one part in 10,000, originally

constructed for use in check weighing packages of costly chemical products, can now be used for production weighing with laboratory accuracy. Heart of the scale is the Thayer flexure plate leverage system which functions without the use of knife-edge.



pivots. Exact weight is indicated by a direct reading register in the decimal system either in pounds or grams, and the scale may be used for classifying and segregating weight groups if desired. Available in various capacities, it can be furnished with a ticket printer, chart recorder, remote weight indicators, fully automatic conveyor systems and other optional features required. Thayer Scale Corp., Thayer Park, Pembroke, Mass.

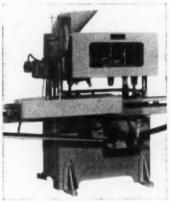
A new chemical release coating

New "Dri-Dux" release coating is reported to solve one of the major problems in the packaging of sticky products such as adhesives, tar, pitch, asphalt, synthetic rubber, resins, etc. Fibre or metal drums, corrugated boxes or trays, paper bags, etc., treated with Dri-Dux coating, which contains silicones, can be filled with hot or cold sticky products and are easily emptied. According to the supplier, foods and chemicals can be packaged in containers treated with the new coating. The Dri-Dux Co., 30 Nicholson St., Lodi, N. J.

Automatic sealer for pint to gallon cans

Cans using the standard 1-in, seal can be automatically sealed on a new can-sealing machine introduced by

Resina. According to the manufaccontainers turer. go right into the automatic sealer direct from the fill. ing machine without any operator in attendance, All that is required is to load the hopper with lids make a few adjustments to suit the can being run switch on the machine, the company reports. Change-over for container size is



just a matter of a few minutes. The unit handles pints up to gallons on center-hole-type cans, and up to quarts on off-center cans, at speeds up to 60 per minute. Resina Automatic Machinery Co., Inc., 572 Smith St., Brooklyn 31.

Heat-sealable saran film

A special processed and treated Dow saran introduced by Printon is reported to run as fast and as economically as cellophane on conventional forming, filling and heat-scaling machinery such as the Hayssen Compak and others, Called Saran-O-Seal, this new film reportedly can reduce packaging costs up to 35% due to time, labor and materials savings. It is available in all widths and thicknesses of saran film, from 50 to 200 gauge. Printon Corp., 304 E. 23 St., New York 10.

New shrinkable packaging film

A positive-sealing shrinkable packaging material called Cryovac Film, for wrapping meats, cheese and poultry, has been added to the Cryovac line of bags and pouches. The material is reported to combine excellent heat seal-ability and tight cling, yet is easy to handle and adaptable to a wide range of products. Basically, the material is the same as that used in Cryovac bags and provides a skintight fit to the product. The Cryovac Co., Div. of W. R. Grace & Co., Cambridge 40, Mass.

Two new anti-adhesive silicones

Paper and paperboard treated with Dow Corning 22 water emulsion or Dow Corning 23 solvent solution are claimed



Do you really love me

for Myself

3

Cocktails, candlelight and courtship are one thing. The breakfast table, hair up in curlers and marriage can be quite another. As different for instance as buying packaging boards in a competitive and a seller's market.

We produce bleached boards and sell them under a plan unique in our industry. We actually reserve machine time for each regular customer. The board produced (to customer specification) in that time belongs to him in all kinds of markets.

With integration of mill and converter very much in vogue, Crossett, as an independent mill, is without ties of any kind except those of loyalty to regular customers.

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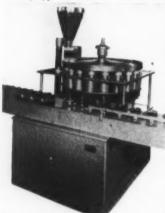
Equipment and materials

Continued from page 176]

to have extremely high surface resistance to tacky or sticky materials. They may be applied with conventional equipment to paper, kraft, parchment, glassine, cellophane, etc. The concentration of silicone may be varied to suit the paper being treated and curing schedules range from 10 sec. at 350 deg. F. to 2 min. at 235 deg. F. After curing, the silicone treatments are said to exhibit full "release" characteristics immediately and retain them for the life of the paper stock. They reportedly have no effect on untreated papers when packaged in roll form or on materials with which they come in contact. Dow Corning Corp., Midland, Mich.

Rotary filler with dust-control feature

A new Whiz-Packer introduced by Frazier is reported to fill any type of container—canister, can, iar, plastic dis-



penser-with powders at speeds up to 300 per minute without any dust problem. Being fully automatic, it requires no operator in attendance. Change-over from one container size to another is made in only a few minutes. All contact parts are of stainless steel or aluminum and a special trip device provides for no container no fill. Dimensions of this rotary filler are

40 in. wide, 48 in. deep and 72 in. high. Average conveyor length is 10 ft. Frazier & Son, 20-01 Industrial W., Allwood-Clitton, N. J.

Fibre can with plastic sifter closure

A fibre-bodied can with polyethylene top and snap-in spout, called Poly-Sifter, has been announced by Cin-Made Corp. The plastic closure is available with three different styles



of openings: three \$16-in.-diameter holes, nine \$52-in. sifter holes, or one pouring spout. Openings are covered with a polyethylene cap, easily removed and replaced by the consumer. Fibreboard can body may be

had with plain or special inner liners and a double seamed-on metal bottom, plain or labeled. Cans are received by the packer with top and bottom applied. Filling is through the 1½-in. hole in the can top. After filling, the completely assembled plastic cap and spout are merely snapped in by slight hand pressure. The Cin-Made Corp., 800 E. Ross Ave., Cincinnati 17, Ohio.

Two new adhesive-label papers

A reliable peelable label paper designed specifically for the textile industry and a low-temperature adhesive label paper for labeling pre-packaged meats have been announced by Nashua. The new Imac Tex label paper for textiles is simple to use, requiring no labeling dispensers or separate labeling operation. The label can be applied with conventional pressing equipment as a part of the usual pressing operations in the preparation of fabrics for the market. It reportedly clings to all types of fabrics and withstands repeated flexing and rough handling. The new Imac "ML" label paper for labeling pre-packaged meats is reported to eliminate the necessity for high temperatures that may scorch or damage packages. Adhesive used on ML label paper is reported to make a positive adherence over a wide range of sealing temperatures. Surfaces of heating elements may be adjusted so that the temperature range is between 215 and 345 deg. F. to affix labels to films. The ML label paper is reported to perform successfully on various types of automatic and semi-automatic labeling equipment. Nashua Corp., 44 Franklin St., Nashua N. H.

Nylon-lined plastic bottles

Continental Can's Plastic Container Division has developed a nylon-lined polyethylene bottle which is said to be able to hold products that, because of permeability and solubility characteristics, were not able to be held by regular polyethylene bottles. The new nylon lining, from 0.001 to 0.002 in. thick, is said to control product permeation in almost all instances. The lining can be applied in all Boston round, cylinder and oval-shaped bottles within certain limitations. Continental Can Co., 100 E. 42 St., New York 17.

Clinch torque tester for aerosols

A new clinch-quality evaluator for aerosol dispensers announced by Continental Filling quickly determines the force necessary to twist a cap in the can opening. The device is said to indicate positive correlation between high torque readings and good sealing. An indicator lever is attached to a clamp locked over the outside lip of the can, then the can is twisted manually. As long as the cap and can seal hold tight, the lever moves with them to give a spring-balance torque reading in inch-pounds. This reading is locked automatically when the cap twists in the opening. Continental Filling Corp., Danville, Ill.

New electronic package classifier

Toledo Scale's new electronic package classifier is designed for check weighing pre-filled packages of material "on the run" for underweight, overweight or both. An

on the run for underweight-sensing mechanism set to a predetermined weight assures that all units accepted are within the specified tolerance requirements, according to the manufacturer. An over-under zero indicator provides a visual check of the weight of items passing over the classifier in relation to the desired weight. Adjustment of the tolerance



range, when changing from one package weight to another, is reported to be readily made. The machines are custom built in several sizes to meet job requirements and to handle practically any shape of package. The Model 9450 illustrated handles package sizes up to 4½ in. long, 2½ in. wide, I in. deep and any weight of package within these dimensions can be checked. Toledo Scale Co., 1097 Telegraph Rd., Toledo I Ohio.

Italian press-bagmaker available in U. S.

Parsons & Whittemore has been appointed exclusive U. S. distributor for the "Kleina-Rotoplast" combination multi-color flexographic press and bagmaker made by the

NO cardboard box hides the beauty of these new Martex Towel Gift Sets. Martex takes the jackets off. Replaces them with sparkling clear clopene. Now the Gift Sets are completely visible; and they have complete protection. as well! For clopene's remarkable tear strength and toughness assures long shelf life...it offers lasting protection against water, moisture, air or changes in atmospheric conditions.

Encourages impulse buying

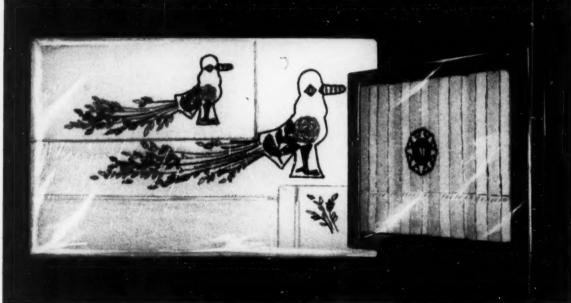
"clopane allows our Gift Sets to be seen at their very best," Mr. W. D. Hartman, Martex Vice-President in

charge of sales says. "It encourages impulse buying without permitting the merchandise to become soiled or shopworn. It gives us a stunning display as well as a lovely package. clopene is extremely satisfactory."

Available in sheets or rolls

You, too, will find clopane one of the most useful clear films ever developed. clopane gives you freedom of choice. It is not restricted in width by machinery requirements.... clopane is available up to 108 inch widths in sheets or rolls... interleaved if you wish. Also available in endless, seamless tubes from 2" to 54" in width.

MARTEX TAKES OFF ITS JACKET!



things look better far longer in Clopedne sparkling clear film

clopane is the lowest cost, crystal-clear, lightweight, extruded vinyl film. For still lower cost packaging investigate Clopay's polyethylene films today! For details, write, wire, or phone
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Clopay Square, Cincinnati 14, Ohio

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Gentlemen:

Please send me FREE copy of "clopune Facts," and FREE samples.

Name

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Equipment and materials

Continued from page 1781

Bielloni Co. of Milan, Italy. The Kleina press prints paper, cellophane, polyethylene and other flexible materials in two, three or four colors at speeds up to 325 fpm. It comes in three widths: 15%, 17% and 19% in, and has a repeat range from 9½ to 31½ in. The press may be used for roll-to-roll operation as well as inline with the bagmaker. The Rotoplast bag machine, made in widths of 11%, and 19% in, is an automatic roll-fed unit that cuts and heat seals either flat or gussetted thermoplastic tubing. It makes bags from 4% to 31½ in, long at speeds up to 12,000 per hr, for the smallest size and 2,500 per hr, for the largest size. Parsons & Whittemere Graphic Corp., 250 Park Ave., New York 17.

New model skin-packaging machine

High-speed skin packaging of toys, builders' hardware, novelties, sporting equipment and other items is claimed



for the new model Form. A. Pac chine announced by Plastic Packaging Machinery. It is said to enable conveyor-line operation immedi. ately adjacent to the packaging platen. thus completely eliminating any machine down time due to the loading of the platen with the items to be packaged.

The platen at all times is level and completely free of obstructions in three directions which, according to the company, is due to a cantilevered heater and a new reversedrape technique. Plastic Packaging Machinery Co., Inc., 8832 Renton Ave., Seattle 18, Wash.

Improved saran-base lacquers

Greater grease resistance, as well as water and gas impedance, is reported to be obtained on many types of films and paper with a ready-to-use saran-base lacquer announced by Pyroxylin Products. Modifying agents and solvents are blended with Dow saran resins to produce lacquer compositions said to be suitable for use by converters and coaters on paper and on cellulose acetate, polyester and polyethylene films. Pyroxylin Products, Inc., 4851 S. St. Louis Ave., Chicago 32.

Thick-walled squeeze tubes

New polyethylene squeeze tubes designed for dispensing fine lubricants, fluid or powdered flakes, fine powders and similar industrial and household products have been announced by Permanent Label. Made entirely of polyethylene, each tube consists of an extruded body with walls 0.025 in. thick, a molded

head applicator tip and a small acorn-type cap grooved inside to snap over a ridge

on the tip for tight closure. Tubes are supplied unassembled, with bottom heat sealed and with body either undecorated or decorated by silk screen, offset or hot-stamp printing methods. The tube is filled through the top, then closed by inserting the top into the applicator head, which is held on by friction. For use, the tiny end closure is snapped off

and the tip punctured or cut off to provide a dispensing orifice. Tubes are said to be available in any length by ½-in. inside diameter and with component parts of the same or different colors. Permanent Label Corp., 49 Ackerman St., Bloomfield, N. J.

Decorative opal glass lars

Two new glass containers—a 411₁₆-oz, opal bottle and a 4-oz, opal blown jar with pressed cover, are new offerings



by Hazel-Atlas. Attractively designed for packaging vitamins, drugs, pharmaceuticals, cosmetics and other products, these high-style containers are well proportioned and blend with any home color scheme. They are adaptable for re-use by the consumer for holding such items as spices, candy,

condiments and toiletries. Hazel-Atlas Glass Div. of Continental Can Co., 100 E. 42 St., New York 17.

New daylight fluorescent colors

A line of screen process daylight fluorescent colors particularly adapted to volume packaging runs has been announced by Lawter Chemicals. Called Bold, the colors include red, orange, cerise red, medium orange, gold yellow, lemon yellow and green. They are reported to maintain their brilliance indefinitely on all package applications and may be applied at a rate of thousands of impressions per hour on standard silk-screen process presses. Cost is said to be competitive with regular colors. Lawter Chemicals, Inc., 3550 W. Touhy Ave., Chicago 45.

Automatic bag handling and filling

Equipment to handle a bag automatically so that it is delivered to a filler and opened to receive the material has been introduced by Frazier & Son. Illustrated herewith is



a typical fully automatic set-up for feeding, filling and scaling a bag, requiring only that the bag hopper be supplied with bags and the feed bin filled with material. The company's Whiz-Packer elevator con-

veyor delivers material to a Whiz-Packer volumetric filler, which deposits the material into a bag whose mouth is kept distended until released. The filled hag then moves on a vertical conveyor to an Amsco Hi-Speed fully automatic rotary sealer. Frazier & Son, 20-01 Industrial West, Allwood-Clitton, N. J.

New small-sized offset press

Zarkin Machine is now the world-wide distributor for the Royal Zenith 23 single-color offset press made in West Germany. This press takes a sheet 15 by 23 in. and is a companion of another Zarkin press, the Royal Zenith 29, which takes a sheet size of 23 by 30 in. and prints up to four colors. Zarkin Machine Co., Inc., 34-19 10 St., Long Island City 6, N. Y.

New heavy-duty gravure converter press

Advanced design of a new Champlain converter press reportedly offers printing widths of 44 in. (Model 44) or 54 in. (Model 54), both of which accept cylinders from 20 to 40 in. in circumference. High speed and precise register are

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Forest Products Division

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Equipment and materials

[Continued from page 180]

maintained, according to the company, on a wide range of work including cellophane, paper-backed foil, gift wraps, beer labels, bread or frozen-food wrappers, paperboard, etc. Operational adjustments and job change-over are facilitated by complete walk-in accessibility between color units. Champlain Co., Inc., 88 Llewellyn Ave., Bloomfield, N. J.

Combination automatic carton maker

General Corrugated Machinery announces a new combination automatic carton maker that glues and or tapes bottom



flaps before filling and which also can be used for sealing the top flaps after filling. This two-purpose machine has a Ureturn to a common front roller table (see left

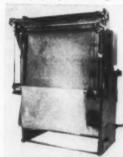
foreground in accompanying photo). The carton at the rear left has been set up by the operator, upside down on one of the dummies, and has been rolled forward into the machine. Then glue is applied automatically by a "Closed-System," the flaps are closed and the carton moves to the back of the machine to receive tape over the ends as it returns to the table (right foreground). The "Closed-System" of gluing is always ready, thus saving make-ready and clean-up time. A simple hose clamp allows easy transfer of glue container. For long shut-downs, according to the company, easy transfer to a bottle of water quickly cleans out glue and the water stays in the system for a trouble-free fresh start. General Corrugated Machinery Co., Inc., 141 W. Central Blvd., Palisades Park, N. I.

New offset gold inks

A new high-finish gold-colored ink called Speed King Offset Gold that can be used by lithographers on coated papers and board has been announced by IPI. The newly developed ink is reported to have been used for label and carton work on presses 35 by 45 in. and larger, with some 50,000 to 60,000 impressions being obtained from a single plate. Interchemical Corp., Printing Ink Div., 67 F. 48 St., New York 36.

New drum-liner machine

A fully automatic machine for manufacturing drum liners from polyethylene tubing has recently been developed by

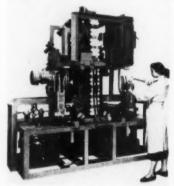


Walgan Machine. The new "Drumliner" is said to handle tubing up to 40 in. wide and makes bags up to 75 in. long at speeds from 10 to 25 bags per minute in all standard film gauges. The machine, which occupies a floor space of 4 by 5 ft., is said to reduce substantially production costs of polyethylene drum liners previously made by hand or semiautomatically. It is suggested that this machine will open many new markets as a re-

sult. Sales agent for Walgan Machine Corp. Drumliner is Conapac Corp., 120 E. 13 St., New York 3.

High-speed multiple-unit loader

Frozen orange-juice cans reportedly are loaded at the rate of 1,200 a minute into six-unit multiple packages by the new High Speed Can Band Juice Loader, now being sold



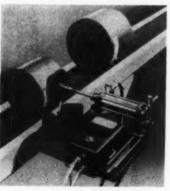
or leased to frozenconcentrate ners by Container Corp. This newly designed highspeed unit loads the output of two canning lines. The Can Band carton gives the shopper the option of buying either three or six cans at a time at no extra packaging cost-since a perforated score enables the carton to be divided into two three-can

units at the retail outlet. The compact machine, which requires only one operator, is only 7 ft. wide, 8 ft. high and 3 ft., 10 in. long. Basic principles of the machine, it is said, can be adapted to package other standard food cans. Container Corp. of America, 38 S. Dearborn St., Chicago 3.

Newly developed roll transfer

A new roll transfer perfected by Sage Equipment operates with an electric eye and air cylinder. The electric eye de-

tects the various colored labels on packages and actuates a push-off device. The device, designed for manufacturers whose products are identified by differentcolored labels, detects the packages according to their colored labels and pushes them off the Sage troughing belt conveyor. When it is necessary that a package or roll con-



tinue through, the package is turned so that the label does not pass the light beam. Sage Equipment Co., Inc., 30 Essex St. Buffalo 13, N. Y.

Foil-lined lids for rigid foil containers

New convenience, food protection and merchandising impact are advantages claimed for new foil-lined paperboard lids being offered by Container Corp. for the rigid foil



frozen-food containers produced by Ekco-Alcoa. They are available for all sizes of aluminum foil containers, in both stock and custom designs, and can be imprinted with designs developed by the individual manufacturer. Red, yellow and blue are the Picture your package with a



Revell has done it—magnificently ... provided a sturdy, handsomely lithographed carton with a picture window of tough, clear-as-crystal Kodapak Sheet! A place for everything and everything in its place! Merchandise sells on sight . . . comes to customers fresh, untouched -protected from dust, dirt, prying fingers.

Interested in doing a functional restyle job on your packaging? Want to develop new displays, indoor or outdoor signs? Call our representative or write.

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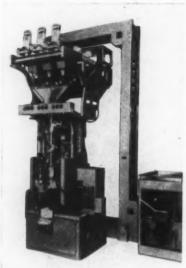
Equipment and materials

[Continued from page 152]

standard colors, but with the use of color photography, a fourth color may be employed. The under side of the lid is lined with foil. The upper side, of solid bleached sulphate paperboard, offers a merchandising display surface. Container Corp. of America, 38 S. Dearborn St., Chicago 3.

New automatic bag-filling machine

Illustrated is Hayssen's new Model G Single Tube Compak machine, equipped with three automatic net-weigh scales and bucket elevator lift conveyor, which automatically



fills forms. and seals bags ready for shipment. at speeds of 30 to 50 per minute. de. nending on package size and product to be filled. The machine basically designed for two types of operation: (1) One that has many changes, since the machine reportedly features quick change of package size and the standard machine is wired to seal both cel.

lophane and polyethylene material with interchangeable parts for both. The new range of the machine allows packaging up to 5 lbs. of many products such as beans, rice, popeorn, humus, etc. (2) The machine is claimed also to be suited and economically practical for firms producing as few as 1½ million bags per year because of saving in roll stock and labor. Hayssen Mig. Co., 1305 St. Clair Ave., Sheboygan, Wis.

New heat-sealing wrapper

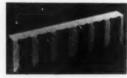
Foilrap 2822 is the name given by Rap-In-Wax for a new foil overwrap that seals on both sides. Claimed to be the first practical two-sided heat-sealing wrapper, the structure is coated on both sides with a protective corrosion-resistant, thermoplastic coating. Because the coating is on the outside of the sheet, positive and tight foil-to-foil or foil-to-paper seals are said to be assured. Foilrap 2822 is made of 0.00035 aluminum foil on 25-lb. S. C. sulfite and reportedly stays flexible under a wide range of temperatures. Tests are said to show that the sheet seals with relatively less heat than conventional wrappers, thus resulting in fewer heat-defaced packages and longer wrapping-machine life. The sheet is especially recommended by the supplier as a carton overwrap. Rap-In-Wax Paper Co., 150–26 Ave., S. E., Minneapolis 14, Minn.

New size of vibratory unit

A new size of vibratory unit added to Vibratory Feeder Co.'s regular line has been built and powered specifically to handle 24-in, bowls, incorporates the three-spring suspension principle, with springs arranged in a near-vertical position for greater balance and increased steady flow, according to the supplier. This new drive unit is reported to effect economy in both original investment and operating costs. Called the No. 20, this new base unit, measuring 20 in in diameter and 13¼ in, high, is available in counter-clockwise as well as clockwise movement. Vibratory Feeder Co., Div. of Automation Devices, Inc., Erie, Pa.

Multi-unit packaging system for glass packs

A new Cluster-Pak system, reported to be suitable for multi-unit cartoning of every type and size of glass container, has recently been announced by Atlanta Paper.



The new multiple glass-pack carton has corrugated inserted partitions to protect the glass and comply with freight shipping and mailing specifications. A device known as a plunger, now available on all automatic

Cluster-Pak machines, pushes a corrugated pad between every jar in sequence, yet the inserting mechanism is said never to slow down the speed of the machines. The Cluster-Pak Automatic Midget placed in a production line gives fast, uninterrupted production flow capable of speeds up to 30 cartons per minute, while the bigger-volume Universal Cluster-Pak machine operates at speeds up to 150 cartons a minute. Illustrated is a six-pack multi-unit carton for glass-packed baby food. By tearing the carton along the center perforation, it becomes a three-pak. Atlanta Paper Co., Div. of The Mead Corp., 950 S. Marietta Rd., Atlanta 2. Ga.

Pre-labeled polyethylene bags

Separate handling of labels and their attachment to polyethylene bags is said to be entirely eliminated by a new process recently developed by Par-Pak, in which printed



labels are automatically attached at the same time that the bags are fabricated. The user has only to fill the bags and close them by stapling or heat sealing, without handling the labels as separate units. Because the labels are interleaved between front and back of the bags, it is much easier to open

the bags for filling. These bags, handled just as easily as printed bags, are said to be especially well suited for rack-display merchandise. They are adaptable to semi-automatic packaging lines. Paper labels are printed one side in any design, up to four colors, with or without holes. The Par-Pak Co., Inc., 19,944 Detroit Rd., Cleveland 16, Ohio.

Non-blocking wet ink varnish

Pittsburgh Plate Glass has developed a new non-blocking wet ink varnish for cans that is said to possess good color retention at various baking schedules, making it particularly useful where plate is coated and stored at high temperature and humidity. It is especially recommended for use on beer and beverage cans and frozen-fruit cans. Pittsburgh Plate Glass Co., Paint & Brush Div., 1 Gateway Center, Pittsburgh 22, Pa.

High-speed trimmer-sealer

A neat, uniform, dustproof bead seal at a production rate of more than 1,500 packages per hour is claimed for CleveNew
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Seban is the long-needed answer to these costly sealing problems—and many more! 1. Poor bonding to impervious surfaces; 2. Excessive foaming in glue pot; 3. Excessive glue pot build-up; 4. Too critical a film thickness; 5. Extreme stringing; 6. Rate of set too fast or too slow; 7. Insufficient or excessive penetration; 8. Improper tack range; 9. Poor water resistance; 10. Short shelf life; 11. Unsightly squeeze-out; 12. Blistering; 13. Poor bond stability; 14. Unpleasant glue line odor; 15. Mold development; 16. Arduous glue pot clean-up; 17. Short pot life; 18. Lack of, or too much pliability.

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Bell-pak is specially designed to package liquids or semi-liquids in pouches . . . direct from roll stock.

Packages are formed, filled and sealed in one continuous operation. Electric eye registration. Sealing temperatures automatically controlled. Pouch sizes variable to meet product and fill requirements. For complete details, write

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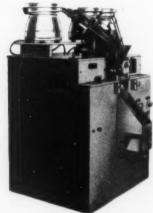
O S H K O S H , W I S C O N S I N

Equipment & materials

land Lathe's new Trimseal machine for bead seal and cut-off of soft films such as polyethylene. The machine utilizes a hot-wire principle. In one pass, the foot pedal locks the film to accomplish a bead seal, trims away excess film and blows the chips into a waste container. The manufacturer claims it eliminates wide seals, puckered seals and unsightly ears. Cleveland Lathe & Machine Co., 5400 Brookpark Rd., Cleveland 29 Ohio.

Fully automatic packeting

The new BFM Hardware Formapak machine is reported by Brown Filling Machine to packet up to four different quantities of four hardware items, form-



ing the packet from a single roll of heat-sealing material. It automatically feeds, counts, wraps, seals and codes in a single-station operation at speeds up to 100 heat-sealed packets per minute, each imprinted with up to three lines of identification. Outstanding feature of the unit is its economical use of packeting material, according to the manufacturer. It is said to be quickly adjustable to optimum-size packets ranging from 2 by 21/2 in. up to 41/2 by 5 in. An electric-eye accessory controls front and back registration when preprinted packeting material is used. "Air-Jet" rejection of non-oriented items requires no change-over adjustment for most hardware items. A choice of several packeting heads is available: the Vibracount, the Delta, the Turret or the Semi-Automatic Vibracount, Brown Bag Filling Machine Co., Inc., Duck Mill Rd., Fitchburg, Mass.

New color printing process

With the new color printing process known as Kromotype, announced by Monsen Typographers, it is possible to see precisely what a complete package label, display, etc., will look like in color before making costly four-color



The built in consumer appeal of a Zumbiel created package will put the "permanent plus" in your sales picture. This tape won't be able to measure it, but your profits will. May we submit—without obligation—"Sales-measured" design ideas, and cost estimates.

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MODEL 765 Core Cutter FOR PAPER CORES FROM 3" TO 6" LD.

SIMPLE OPERATION

ACCURATE

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OTHER MODELS
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FOR LARGER
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Designed to cut a core with the highest quality edge. Cut edge is straight, smooth and free from burrs. Working procedure is so simple that anyone can operate this core cutter. Light in weight, can be conveniently mounted on a 24" x 72" table top.

Without outboard support, cuts can be made to the center of a 90" long core, permitting 45" long cores to be made. For longer cuts, an outboard support bracket can be supplied. The hardened platen sleeve may be shifted as required to present four different cutting surfaces. Knife, platen sleeves and adapters are quickly replaced or interchanged. John Dusenbery Co., Inc., 275 Grove Ave., Verona, N. J., Tel: CEnter 9-3900.





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If you have a packaging problem, or special packaging idea, Mack Molded plastics may be the solution. Mack technicians offer a 3-way service on product packaging, custom closures and merchandising sales aids. Mack will assist in the development of your idea, make recommendations on materials selection and collaborate on design. For help based-on-experience, just call or write outlining your problem.

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Mack molded plastic closures, in all stock sizes, are available for prompt delivery. Select the design best suited to your product from the wide variety offered by Mack. Samples promptly on request: address Mack Molding Company, Inc., Wayne, N. J.

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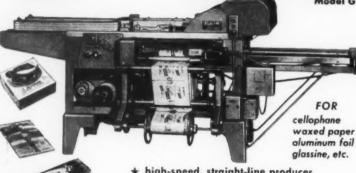
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Model GSA



- high-speed, straight-line producer
- fully adjustable for package variety
- * rapid changeover adjustments

Fully automatic, the great Elain-Wrap is built to be a steady, swift and easily maintained producer! Designed to handle heat-sealing materials. it can also be equipped with photo-electric registration controls for printed wrappers. And the Elain-Wrap is unequalled in its price field for speed. Write for folder Dept. M-79 or: Send samples for quotations and recommendations on your needs.

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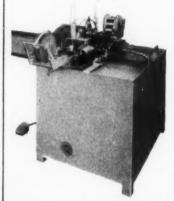
200 Brook Street - Elgin, Illinois

Equipment & materials

plates. The design can be put on a blank dummy, cut out and assembled, or on vinyl and wrapped around a made-up package. Relatively inexpensive, the new process is said to be suited for use where one to a dozen of a given item is desired. The quality of the color reproduction is said to be on a par with the quality obtained with letterpress and offset printing, and is said to be hardly distinguishable from the conventional printed product, Monsen Tvpographers, Inc., 22 E. Illinois St., Chicago II.

New roll-feed labeler

Globe Ticket's new Dumatic labeler is designed to apply heat-seal labels from a continuous roll to stretch socks and boxes. For the hosiery industry, the



machine reportedly applies both top and bottom labels simultaneously at 40 per minute. A special thermoplastic adhesive makes a firm bond to all fabrics without leaving residue when the label is removed, according to the maker. The bottom label is die cut so that when applied, the base of each package is completely enclosed in its protective covering. For merchandise put up in small or medium-sized paperboard boxes, the label can be applied to one or both ends in the form of an "L" or a "U." Thus, in addition to its function as a label, it also acts as a closure. Optional equipment is a coding device for imprinting variable information as the label is being applied. Globe Ticket Co. 112 N. 12 St., Philadelphia 7. Pa.

New metallized plastic sheet

Coating Products and Gilman Bros. have jointly developed a new metallized plastic sheeting for vacuum-forming purposes called Mirro-Brite Gilco polystyrene. The base material is manufactured from Dow's 475 and 480 formulations, which reportedly provide a wide range of flexing qualities and elonga-



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We welcome inquiries for sanitary food boards, hot-and-cold drink cup stock, and linerboard, to be made to your own exacting specifications.

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NEW HI-VI FEEDER BY ERIEZ HAS THE FEATURES YOU'VE ALWAYS WANTED

mechanical design and construction materials produced this outstanding new feeder. Based on results of field research, these new units incorporate many of the features asked for by

people who use feeders. Available in a wide range of sizes to meet all needs. Eriez feeders give you higher operating efficiency over broader operating ranges-let you move more materials



- Rust-proof long-life spring
- More uniform feed
- No rectifier needed

NO RECTIFIER NEEDED! Just plug or wire in these new feeders; they operate at 3600 CPM directly off an AC line. No rectifier is needed, as a lifetime-powered magnet replaces this element by providing an automatic, inherent magnetic rectification system which is simple, troublefree and highly efficient. All energy (a two-way push-pull vibrating action) goes for productive performance.

TOTALLY-ENCLOSED DRIVE ELEMENT: can't be

damaged or lose efficiency due to contamination by moisture or foreign materials

DISC-SHAPED GLASS FIBER SPRINGS: rustproof, they're not subject to corrosion, 'packing", fatigue or other critical characteristics of steel leaf spring systems.

GREATER OUTPUT CAPACITY: more work output than any other feeders of comparable physical size.

OTHER FEATURES INCLUDE:

Almost silent operation • Rectangular-shaped tray bottom for more uniform feed maintenance and operating costs

An Eriez Feeder provides accurate, controlled feed of bulk materials variable from ounces to tons per hour — automatically. Works well with all types of materials: hot, dry, dusty, lumpy, abrasive, etc. Conveys, spreads, agitates, separates, blends, dries, cools and mixeseconomically and in a minimum of space. Only Eriez Feeders have HI-VI drive systems— ered by an Alnico V magnet that's permanent



Equipment & materials

tion properties. Thicknesses vary from 20 to 125 mils in sheets or rolls up to 40 in, wide. The sheet is available with any color background, using a Mirro-Brite finish on one side and a contrasting color on the other, Couting Products Inc., 101 W. Forest St., Englewood, N. J.; Gilman Bros. Co., Gilman, Conn.

Cylindrical container imprinter

Variable information can be imprinted at production rates on paint cans, food containers, cosmetic jars and similarly shaped objects with a newly developed



Markem machine. This new 64AC machine is designed for larger, heavier items than can be handled by the company's other standard models of cylindrical-object markers. Its use allows continuous operation in filling and sealing lines, and controlled ejection onto a chute permits continuous flow into the packing line. Speed is said to range from 20 to 70 units per minute. depending on weight and size of container. Printing area can measure up to 141/2 in, circumferentially (or completely around a 412-in.-diameter container) by 41/2 in, along the axis of the object. Variables can thus be repetitively imprinted on a panel all the way around a can. Objects can be 1% to 41/2 in. in diameter and up to 10 in. high. Markem Machine Co., 150 Congress St., Keene 68, N. H.

New tamperproof container

A new box developed by National Metal Edge Box is a full-telescope type with double safety lock that is reported to

enable shipment of a product that is not to be tampered with until it is in the hands of the ultimate user. It



comes in various dimensions ranging from a depth of \$16 to 12 in. and 24 by 24 in. in width and length. Its positive double lock can only be opened by tearing the tabs on each side directly under the lock. The new container is recommended as a pharmaceutical or parcelpost mailer. When used as a mailer, it is reported to save time in mailing rooms, since it can be closed without the necessity of wrapping or sealing with tape. National Metal Edge Box Co., 354 N. 12 St., Philadelphia 7, Pa.



NATION'S LEADING VACUUM FORMER NOW IN GIANT NEW PLANT

Offers Formed Parts, Toys, Lighting Panels and Blister Packaging at Best Possible Prices *Plus* Unsurpassed Service

With giant new factory, fully equipped with engineering, mold making, die-cutting, silk-screening, decorating, folding, assembly and heat sealing, this custom fabricator of vacuum-formed plastics efficiently mass produces all jobs in any type of thermoplastic sheet, sizes ranging from smallest blister to 42" x 72" parts.

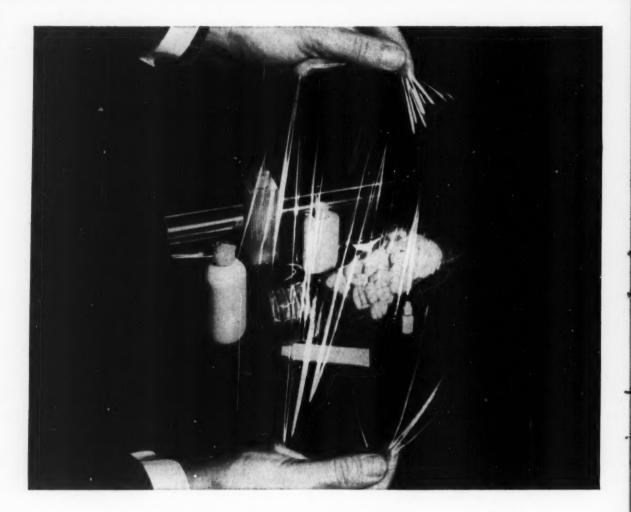
This is company that has successfully solved toughest problems in vacuum-forming. National leader in 3-dimensional displays and contour domes. Unquestionably largest in space, equip-

ment and volume, with extra capacity to handle all your requirements for displays, packaging and formed components.

You get better quality, faster shipments, lower prices. Act now to get on-time delivery at substantial savings.

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Saran resins improve packaging materials

Here's why it will pay you to look to saran lacquer resin coatings to extend the utility of your packaging materials:

- They reduce water vapor and gas transmission rates.
- They provide outstanding resistance to oils, greases, acids, alkaline solutions and many organic liquids and vapors.
- They add protection, increase shelf life.

- They help meet the specific needs of a variety of new applications.
- They impart outstanding functional properties at coating thicknesses as low as 0.1 mils.
- They readily adapt to printing and coating equipment.

THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Dept. 1878J.

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GROWERS CONTAINER CORPORATION

PLANTS IN SALINAS AND FULLERTON, CALIFORNIA AND JACKSONVILLE, FLORIDA

HEADQUARTERS in SALINAS, CALIFORNIA
SALES OFFICES — CALIFORNIA: Salinas, Fullerton, San Francisco, Los Angeles, Santa Rosa, San Jose, El Centro, Fresno
• ILLINOIS: Chicago
• LOUISIANA: New Orleans
FLORIDA: Jacksonville, Orlando, Tampa, Lake Wales, Miami Springs
• ARIZONA: Phoenix
• ALABAMA: Birmingham
• SOUTH CAROLINA: Greenville
• GEORGIA: Atlanta



Plants and people

Karl R. Hines, Jr., divisional sales manager and a director of Nashua Corp., Nashua, N. H., has been elected vice general manager of president and







Hines

Austin

Woodward

Nashua (Canada), Ltd., a subsidiary. He succeeds Hugh M. Niven, who is

Charles C. Austin has been named to the post of sales service engineer for Nashua Corp.'s seven sales divisions. Sherman S. Woodward has been named sales representative for Nashua's Converter Div., in New York City, southeastern New Jersey and Connecticut. William L. Reeves has been promot d to sales representative in Philadelphia and southeastern Pennsylvania for the Flexible Packaging Div.

Beatrice Grove has been named treasurer of Breskin Publications, Inc., publishers of MODERN PACKAGING and Modern Plastics. Miss Grove, formerly assistant treasurer, succeeds the late Ruth Tulbert. Gertrude Binger, who has been with the organization several years, is now assistant treasurer of the corporation.

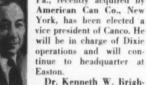
Lloyd Merwin, Sr., has been elected a vice president of Crown Zellerbach



Corp., San Francisco, and appointed general manager for converted products made by the firm's Gaylord Container Corp. division. Joseph

M. Arndt, for many years vice president in charge of sales for Gaylord, has retired. He will continue as a director of Crown Zellerbach and will be an advisor to the corporation.

Clarence L. Van Schaick, formerly president of Dixie Cup Co., Easton,
Pa., recently acquired by



VanSchaick

Dr. Kenneth W. Brighton has been named director of research for American Can Co. He will continue to super-

vise the new products department. Dr. Brighton succeeds Dr. Robert W. Pilcher, who is now scientific coordinator. Both men will headquarter at Canco's Research and Development Center, Barrington, Ill. Joseph H. Fredette has been named assistant general manager of the new products department.

James W. Wardell has been appointed general manager of the non-food container division of Canco's general sales department. He succeeds William F. May, now manager of manufacturing for the Central Div. Mr. Wardell's former position as sales manager of the



firm's Metropolitan New York sales district is now held by Frederick D. Tower.

Canco's Maine district sales office in Portland is now managed by Robert C. Kinne, who has succeeded John W. Gault, retired.

New England beer is now being packed for the first time in New England-made cans following the opening of a beer can line at Canco's Needham. Mass., plant. The new machinery can produce cans at speeds in excess of 450 per minute.

Charles B. Livingston has been appointed sales manager of Marathon Packages, Ltd., Toronto, Ont. He will be in charge of the firm's folding-carton sales in Canada.

Lynch Corp., Anderson, Ind., has contracted to purchase Robbins Plastic Machinery Corp., Elkhart, Ind. The acquisition is expected to increase Lynch's ales volume in automation machinery. Robbins makes machinery for processing extruded plastics for packaging, building construction and insulation, among other industries.

Lynch has named Rex Aumend southwestern district sales engineer. He will headquarter in Kansas City, Mo,

Earl B. Mix, advertising manager for the Lily-Tulip Cup Corp., New York, has retired after 34 years with the firm. He has been succeeded by Marvin Haas, formerly with Crosley and Bendix Home

Ralph C. Lacy has been named manager of the new San Jose, Calif., plant of Pollock Paper Corp., Dallas, Tex. The new facility is expected to be in operation this fall,

Pollock Container Corp., a subsidi-

ary of Pollock Paper Corp., has started production of corrugated boxes at its new \$2,000,000 plant near Garland, Tex. Lawrence S. Pollock is president of the newly formed subsidiary: Robert E. Cole is first vice president, and John C. Hunt is vice president and general man-

The Trescott Co., Inc., Fairport, N. Y., has purchased Niagara Packaging Machinery Corp., Depew, N. Y. The new subsidiary, called the Niagara Div. of The Trescott Co., Inc., will continue to manufacture the full line of Niagara equipment and parts. C. Forrest Richards, founder of Niagara Packaging, is being retained by Trescott as a design

The Film Div. of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has established a Mylar polyester film technical section at its Circleville, Ohio. plant for process and technical development work on Mylar. Dr. Jake T. Nolen has been appointed manager of the section.

DuPont's Film Div. has appointed Dr. Norman A. Copeland as manager of manufacturing for cellophane and acetate. George G. Holman has been named assistant manager, Mr Holman has been succeeded as manager of the Spruance cellophane plant at Richmond. Va., by Donald L. Fitzhugh.

The Lord Baltimore Press, Inc., Baltimore, Md., has appointed Ernest Heath, Jr., as product sales manager of flexible packaging. Mr. Heath will locate at the company's New York office.

Under the direction of Kenneth O. Bates, executive vice president, Arm-





strong Cork Co., Lancaster, Pa., has established two new staff functions as part of a program for the development of major new products and markets. Ed-

mund Claxton is now vice president for new product planning. W. F. Kaufman is to work with him as general manager of the new section. W. N. Hartman, Jr., has been selected to head new product coordination. F. B. Menger replaces Mr. Claxton as director of re-

John A. Douglass has been promoted to supermarket specialist for Avisco cellophane by American Viscose Corp., Philadelphia, Pa. He will assist Thomas O. Williams, assistant sales manager of the Film Div. Leon F. Bishop has joined the division as northwestern representative covering Oregon, Washing-

"A case for automation"



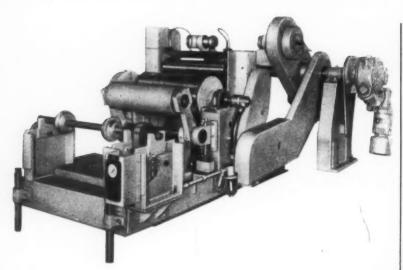
Boxes seal themselves on this streamlined Hotpoint packaging line. Close tolerance H&D corrugated boxes make it work. Result: Faster packing, 30% labor savings. Better see H&D.



HINDE & DAUCH

Subsidiary of West Virginia Pulp and Paper Company

AUTHORITY ON PACKAGING · SANDUSKY, OHIO 14 FACTORIES · 42 SALES OFFICES



NEW

Polyethylene Extrusion Laminator for High Speed Pilot and Commercial Production

Black-Clawson Model PL-450 for Web Widths from 24" to 48"

Here is a compact, versatile machine designed and engineered for use either as a pilot plant or for production lamination of polyethylene film to paper, tissue, board, foil, fabric and cellophane at low experimental speeds up to full commercial operating speeds.

The exclusive *Gross-Dilts* heat transfer insert used in the chill roll assures maximum cooling efficiency. The operating features of the machine provide optimum control and adjustment while running.

Through the application of Dilts continuous unwinding and winding equipment these machines can be operated continuously without slowing down or stopping. This results in increased production, less waste and uniform quality of product.

Give the responsibility for complete engineering and coordination of your polyethylene laminator to the specialists who have made so many successful installations... Write to the Dilts Division for Bulletin 19 DM describing its full line of polyethylene laminating machinery.



lants and people

ton and western Idaho. He will headquarter in Portland, Ore.

Frederick D. Empkie has been appointed general sales manager of Chicago carton sales for Container Corp. of America, Chicago. Walter G. Cott has been named sales manager of Container Corp.'s corrugated container plant in Dolton, Ill.

Kaiser Aluminum & Chemical Corp., Oakland, Calif., has divided its aluminum operations into five major sections, each under a general manager who will be directly responsible to Vice President T. J. Ready, Jr., for all activities



within their particular divisions. Mr. Ready is in charge of all aluminum operations of the corporation. Howard C. Holmes will manage the Products Div., including all foil and foil products, such as foil containers and consumer foil. John E. Menz will head the Industrial Div.; J. T.

Dugall, the Electrical Conductor Div., and Ray G. Boyd, the Overseas Div. Fred J. Drewes has been named administrative manager to supervise staff functions serving the new divisions. Jack W. Watson succeeds Mr. Menz as general sales manager in Chicago.

Edward L. McDonald has been made assistant advertising manager and Arthur P. Wandtke, Jr.,



manager of consumer products advertising. Gene Robertson is now supervisor of consumer-foil advertising, reporting to Mr. McDonald.

Donald C. Mitchell has been appointed eastern regional sales supervisor for the Foil Kraft Div, of

Kaiser Aluminum & Chemical Sales, Inc., Chicago. He will cover New England and the central Atlantic states.



Merle Wainwright has been appointed to head the newly formed commercial packaging division of Specification Packaging Engineering Corp. of North Hollywood, Calif. Services will include packaging of point-of-sale displays and custom unit-of-

Wainright plays and custom unit-ofuse items, especially for the electronic, hardware and toy fields.

Richard T. Mulcahy has been appointed to represent Oneida Paper Products, Inc., Clifton, N. J., in the Cleveland, Ohio, area.

Nekoosa-Edwards Paper Co., Port Edwards, Wis., is negotiating to purchase the Racquette River Paper Corp.'s pulp



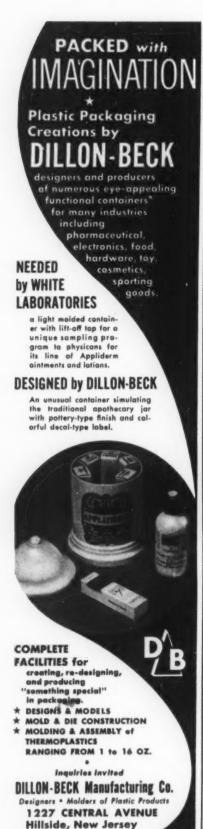
The various types of product packages illustrated use Rhinelander Glassine or Greaseproof as either an outer or inner wrap.



RHINELANDER PAPER

Rhinelander Paper Company, Rhinelander, Wisconsin Subsidiary of St. Regis Paper Company

OLASSINE — Bleached, unbleached, colored, transparent, opaque, window envelope, wax-laminated, heat sealing, coated or tailor-made to fit your requirements. GREASEPROOF — Bleached, unbleached, laminated, wet strength, transparent tracing and transparent manifold parchment grades. PAPERS FOR — Corrugation • Lamination • Bag Conversion • Window Envelopes • Printing.



Plants and people

and paper-making facilities in Potsdam. N. Y. Racquette River Paper Corp., a division of Orchard Paper Co., St. Louis, Mo., will continue to operate its paperconverting facilities at Potsdam.

William Herbst has been made supervisor of starch applications research by National Starch Products, Inc., New York. Irving Martin is now a senior chemist. Both men are located at the company's research facility in Plainfield.

Plax Corp., Hartford, Conn., has acquired new manufacturing facilities to meet market demands in the Middle West. The new plant, at Ligonier, Ind., is expected to be producing blow-molded containers, polyethylene tubing and oriented polystyrene film and sheet by mid-1958

Plax recently announced the formation of a Belgian firm, Sidaplax, S. A., to make and sell plastic bottles and other containers and biaxially oriented plastic films in the Benelux countries. The new organization will have its headquarters in Brussels, with a plant located in Ghent, Belgium. Sidaplax will be the first company, outside the U. S., to manufacture Plax Polyflex.

Lenox

The Dobeckmun Cleveland, Ohio, has appointed W. L. Lenox to manage its newly formed Meat Packaging and Merchandising Dept.

E. H. Leopold has been named district sales manager of the packaging division of Dobeckmun's southern territory, with headquarters in Atlanta. R. J. Smith

is now a special sales representative in the Chicago office, while David C. Kaiser has been appointed a sales representative in the same office.

Graficon, Inc., 114 E. 32 St., New York, is a new industrial design firm headed by Oscar Dubrow and Mishel Greenhere

The first polystyrene plastic manufacturing plant in middle east and southeast Asia has commenced production in Bombay, India. The new facility is owned by Polychem, Ltd., formed in 1955 by The Dow Chemical Co., Midland, Mich., and Kilachand Devehand & Co., Ltd., of India. Polychem's production of polystyrene is expected to give new impetus to the plastics molding industry in India.

Gibbs-Brower Co., Inc., White Plains, N. Y., for many years a representative in the east and midwest for Kidder Press Co., Inc., of Dover, N. H., has opened a new office at 400 Washington Bldg., Madison, Wis., for sales and serv-

FOR IMPRINTING Flexible Wraps and Films IMDUSTRIAL'S



Attached to either continuous or intermittent types of packaging, wrapping or overwrapping machines - HAYSSEN, BATTLE CREEK, STOKES, TRANSWRAP, OLIVER, GLOBE, BARTELT, WRAP-AID, etc. — the RAINBOW Coder automatically imprints clearly, sharply and permanently at packgaing point all combinations of colors, letters and numbers for marking, dating or coding your products.



Streamline marking operations Cut handling costs

Increase volume handled Badure inventory costs Speed up customer service

Everywhere packagers of fresh and frozen foods, baked goods, candies, hosiery, underwear - anything packed in polyethylene, cellophane, waxed paper, glassine, foil, tissue or any material that takes a hat roll leaf impression-know that the RAIN-BOW Transleaf Coder sets a demanding standard of comparison hard to beat because the RAINBOW Coder contributes so efficiently to profits.

The economical, rugged RAINBOW saves package pre-printing, inventory and storage costs-needs no operator, no ink, no makeready— and next to no maintenance.

Before you buy any marking equipment, take a good look at the RAINBOW CODER - you'll have a standard for comparison! For complete information, write today.



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INDUSTRIAL MARKING EQUIPMENT 454 BALTIC STREET | Compuny in

"\$2,000 is traveling in each of those J&L drums, Hank. How'd the linings look?"

"Everyone's as perfect as the sample we tested. Tell Sales to quit worrying, Dick... we'll get there in perfect shape."



LININGS THAT TALK

- J&L specialists, backed up by modern research, are ready to consult on your toughest packaging problems.
- J&L, an integrated steel producer, controls container quality from start to finish.
- J&L steel containers provide engineered packaging for dependable transportation and safe storage,
- Precise fabrication and correct specification of fittings and closures,
- Prompt dependable delivery from nine plants,

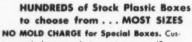
Call your nearest J&L Container Division office for recommendations on your packaging problems. Or write direct to the Container Division, 405 Lexington Avenue, New York 17, N.Y.





Harkin Plastic Molded Boxes Stop Buyers in their Tracks...

Manufacturers, importers and jobbers from all over the nation report Record Sales chalked up by these dramatic plastic boxes.



no mous charge for special boxes. Custom-mode boxes made to meet your specific requirements without mold charges. Send us your product for a model, at no obligation.

PRICED LOWER THAN MOST OTHER BOXES. Because of Harkin mass production and know-how as box specialists. STIMULATE YOUR PROMOTION. Give your sales program a new lease on life with these plastic molded boxes. They're re-usable. Their beauty puts your item in the gift category. The fact that your product is always visible and dust proof cuts handling damage to a minimum.

SUNBURST—7½" x 4¾" x 2¼"

All Gold, hinged box with attractive sunburst design.

cause of pecialists.
program
. They're
pary. The ORCHID—9¾" x 7½" x 1½"

ORCHID—9%" x 7%" x 1% Gold archid on clear or pearlized cover



Harkin Affiliates, inc.

 Call or write today for new illustrated brochure and price list. Dept. MP

"MOLDING SPECIALISTS OF PLASTIC BOXES"

95 MADISON AVENUE . NEW YORK 16, N. Y. . MURRAY HILL 6-2415

"TWENTY YEARS OF EXPERIENCE IN THE CREATION OF SPECIAL PACKAGING"

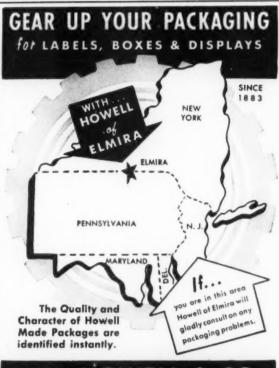


Easy to install, economical to operate, this new Unitized Conveyor is available in any length of 3' increments, i.e. 5', 10', 15', 20', etc.

CONSTRUCTED of STANDARD PARTS

making it easy to lengthen the conveyor if increased production makes this necessary. Obsoleteness of equipment is eliminated. Ideally suited for the pharmaceutical, cosmetic, aerosol packaging, drug and chemical, plastics, food products and baking industries.





F. M. HOWELL & CO.

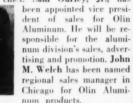
ats and people

icing of Kidder presses, slitters and other equipment. The new office will be managed by John L. Brower, vice president of Cibbs Brown

Dr. L. E. Simerl has been promoted to manager of research and development for the Film Div. of Olin Mathieson



Chemical Corp., New York. He is replaced as assistant manager by Dr. O. J. Sweeting, who continues as film research section chief. Sam Gurley, Jr., has





Continental Filling Corp., Danville, III., has appointed Theodore A. Thonet to the company's laboratory research staff. Mr. Thonet will be engaged in aerosol research.

Lauren C. Dudley has been named general manager of the southeastern district for the Metal Div. of Continental Can Co., Inc., New York. He will headquarter in New Orleans, H. G. Oehlberg is now acting district sales manager in Houston, the position formerly held by Mr. Dudley.

Floyd C. Costello has retired after 44 years of service with Continental Can. Most recently, Mr. Costello was production planning coordinator for the company's Fibre Drum & Corrugated Boy Div.

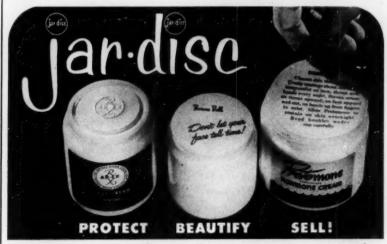
The Center for Research in Package Marketing, Inc., has appointed Paul Fine as vice president and technical director.

Anchor Hocking Glass Corp., Lancaster. Ohio, has commenced construction of a new glass batch plant at its Salem, N. J., container factory. It is expected to be in operation early next

Acme Steel Co., Chicago, recently commenced construction of a new \$23-million steel-making plant at Riverdale, Ill., expected to be producing in 1958.

Bryce Packaging, Memphis, Tenn., a





Give Your Product That Luxurious Look

A secondary seal to insure product freshness and appearance. Oyster white, opaque, matte finish, vinyl—impervious to alcohol, moisture, oil or hot-packed products. Keep jar lids clean and dry.

Your logotype embossed or hot stamped for beauty—printed directions or sales message on flat discs often eliminates a label.

Jar Discs cost surprisingly little—come in flat or formed, embossed or printed styles. Write for samples and quotations on your letterhead. Indicate sizes and quantity if possible with sample jar for exact fit.

THE WALTER FRANK ORGANIZATION

newly organized firm, will specialize in Design and sale of packaging components. Box 111C, Elmhurst, III.



Plants and people

the manufacture of flexible packaging materials for the food industry. The company's line will include paper and film bags and envelopes for the baking and potato-chip industries.





Joseph C. Meara has been appointed sales manager of the Letterpress Div. of Forbes Lithograph Mfg. Co., Boston, Mass. At the

Meara

ra

Bogart

John A. Bogart, Jr., was named as manager of creative sales. Mr. Meara was formerly with Oxford-Print.

W. J. Ray, supervisor of multiwall bag sales for the Bemis Bro. Bag Co., St. Louis, Mo., has been named assistant manager of the company's multiwall paper bag plant in Mobile, Ala.

Herbert W. Suter has been promoted to senior vice president in charge of marketing for The Champion Paper & Fibre Co., Hamilton, Ohio. H. W. Suter, Jr., has been made vice president and manager of the newly formed Champion Paper Sales Div. Henry W. Rigby has been named vice president in charge of corporate development. Karl R. Bendetsen is now vice president in charge of operations, replacing Mr. Rigby. Stephen B. Chase, Jr., succeeds Mr. Bendetsen as vice president and manager of the Texas Div.



Lefcourte

Designs for Industry, a new firm offering a complete service in packaging, interior and product design, has been formed by Albert Lefcourte at 205 E. 69 St., New York. Mr. Lefcourte has directed a wide range of design programs for many appliance manufacturing companies.

John D. Morgan has been named national manager of marketing for Dixie Wax Paper Co., Dallas, Tex. Tom King is now national manager of sales service, while Bill Kimple has been made national promotion manager.

Douglas S. Brown has joined Ostermeyer Paper Co., Inc., Indianapolis, Ind., as vice president and general manager.

H. D. Whitney has been made director of bakery and food sales for Rap-In-Wax Paper Co., Minneapolis, Minn. W. A. Anderson is now manager of bakery sales, while W. R. Freeman is in charge of sales to the dairy, margarine, frozen-pies, ice-cream, cereal and

VALLABLE



THE FINEST

IN PROTECTIVE

PACKAGING

Manufacturers of all types of tin, tin-coated, aluminum, lead, and Sheffalloy tubes. To give your product a container that is safe, sanitary, lightweight, smart and convenient—specify SHEFFIELD. It pays to use the best.

Product of The Sheffield Tube Corporation
Established 1850... Finer packaging from a century of experience
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SHEFFIELD TUBES

ON ANY PACKAGING MACHINE

there is a place where

SILICONE FLUID SPRAY



Anywhere Any Packaging Material

IMS SILICONE SPRAY will cut your scrap and stoppage rate — Save You Money! Try it on your packaging line—you'll see why almost overnight this amazing antistick material has become a necessity in the modern high-speed packaging field!

PRICES: \$ 2.00 Per Sample Can \$ 18.00 Per Unbroken Dozen \$197.40 Per Unbroken Gross

Still lower prices on larger orders shipped in one gross lots on any schedule you request,

Delivered FREE Anywhere in the U.S.A.

SUPPLY COMPANY
3514 LEE ROAD • CLEVELAND 20, ONIO

Plants and people

potato-chip industries, A. E. Sloan has been named director of the industrial and commercial products division, with A. H. Loux as assistant manager. D. E. Armstrong has been appointed director of sales services.





Egan E. F. Egan

Frank W. Egan has been appointed the chairman of the board of Frank W. Egan & Co., Somerville, N. J. He is succeeded as president by Ed. ward F. Egan.

David A. Verner has been named to the newly created position of chief engineer. William H. Willert has been elected a vice president of the company.

The name of Atlanta Paper Co., Atlanta, Ga., has been changed to Mead-Atlanta Paper Co., and the name of The Jackson Box Co., Cincinnati, Ohio, has been changed to Mead Containers, Inc. Both firms are wholly owned subsidiaries of The Mead Corp. Virgil C. Shutze heads a newly established national sales office for both Mead-Atlanta and Mead Containers at 230 Park Ave., New York.

Will S. Johnson, packaging design specialist and advertising artist, has opened a new studio at 600 W. Jackson Blvd., Chicago.

Emhart Mfg. Co., Standard-Knapp Div., Portland, Conn., has created a new industrial engineering department. Merrill W. Hill has been appointed manager. He will be assisted by Blair I. Champlin and William G. Dvorak.

Lawrence Plastic Container Co., Philadelphia, Pa., has expanded its plastic squeeze-bottle manufacturing facilities to include capacities from ¼ to 32 oz. in Boston rou.ds, tapers, ovals, cylinders, oblongs and modern oblongs.

William J. Faymonville and M. Neal Burleson have been named project directors for Reynolds Metals Co., Louisville, Ky.

Paisley Products, Inc., a subsidiary of Morningstar, Nicol, Inc., has acquired the Los Angeles Paste Co., formerly operated by La Mont, Inc., Los Angeles. All finished products, raw materials, equipment and accounts will be transferred to and consolidated with Paisley's Woerz Div. in Los Angeles.

Tension Envelope Corp., Kansas City, Mo., has purchased the envelope division of Brown Bag Filling Machine Co., Inc., of Fitchburg, Mass. All equipment is now being moved from Fitch-

ARENCO

Equipment gives you

Performance Plus . . .

plus ARENCO SERVICE

The Arenco Machine Company of New York is proud of the outstanding performance of its filling and capping machines—proud, too, of the service it provides to assure prompt delivery, accurate installation and perfect performance.



Typical Arenco personalized service is the experience of Riker Laboratories in Los Angeles. Riker urgently needed an Arenco capping machine to implement production. To meet Riker time requirements Arenco delivered the equipment by air, non-stop from Denmark across the North Pole to Riker I shoretries in Los Angeles.

Pole to Riker Laboratories in Los Angeles!
The unit "was delivered as scheduled",
said a Riker Laboratories spokesman, "with
a minimum of effort on our part, and we
are most grateful to the Arenco Machine
Company for their splendid cooperation in
this matter."



GAB Automatic Tube Filling and Closing Machine



GAC Semi-Automatic Ja Filling Machine

The Arenco Machine Company has long been known by its customers for the outstanding performance of its quality machines and the personalized, interested, follow-through service it makes available to them



VUV Buik Materials



Capsolut Vial Capping and Sealing Machine

If this is the kind of machinery—and service—your company demands, write today to

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MACHINE COMPANY, INCORPORATED 25 West 43rd Street • New York 36, N. Y.

Manufacturers of filling, capping, sealing and packing machines.



STRIKING CAN DESIGN AND LITHOGRAPHY GIVE PRODUCTS INSTANT BRAND IDENTIFICATION.

Aren't these cans familiar? They are to most people for two good reasons. One, they hold well-known brands. Two, they're packaged for instant recognition in Continental specialty cans. Each can has been made a national landmark by Continental craftsmen. That's because these specialists have an expert way with design and lithography. The colors and patterns they produce are outstanding.

Why not put these Continental services to work for you? You're sure to get a can that's just the right size, shape and design to make your product a permanent landmark in today's homes. Continuous message... Continuous design

Readily identified in the store, whichever face it shows. Readily identified as a Continental specialty can because

of its dramatic lithography. We've a palette-full of

colors for your choice.



Eastern Division: 100 E. 42nd St., New York 17 Control Division: 135 So. La Salle St., Chicago 3 Pacific Division: Russ Building, San Francisco 4



high strength,
high gloss pressure-sensitive
paper tape <u>costs less!</u>

Use Shuford's SHURTAPE RP-47 for carton and bag packaging...it's strong, printable and comes in red, white, yellow, blue, green and orange colors.

Use printed Shuford's SHURTAPE also for labeling and pricing of individual products, banding packages together for premium or combination deals, special promotions, part identification and for point-of-sale advertising.

This rubber impregnated, rope paper backed pressure-sensitive tape takes ink well, releases easily from the roll and costs less to use!

Seal and sell with printable Shuford's SHURTAPE!

For complete information, write

CLOTHES LINES . TWINES
PRESSURE-SENSITIVE PAPER TAPES
SASH CORDS . WEATHER STRIPPING
COTTON & RAYON YARNS . EXTRUDED PLASTICS



World's Largest Manufacturer of Cotton Cordage

Plants and people

burg to the various Tension plants in the east and middle west.

Vulcan Containers, Inc., of Bellwood, Ill., has named Harold R. Colwell as director of advertising and market research.



Arthur Colton Co., Div. of Snyder Tool & Engineering Co., Detroit, Mich., has appointed E. V. Kistner as branch manager of the company's Chicago of fice. Mr. Kistner will direct activities of the Chicago sales engineering staff in Minnesota, Wisconsin, lowa, Indiana and Illinois

lowa, Indiana and Illinois as well as in St. Louis, Mo., and Louisville, Kv.

A change of address has been announced by the J-E Plastics Mfg. Corp. General sales offices and showroom are at 225 W. 57 St., New York 19. Plant and offices are at 400 Nepperhan Ave., Yonkers, N. Y.

Tom A. Brahe has joined Cornell Paperboard Products Co., Milwaukee, Wis., as sales manager for folding-carton operations. He was formerly West Coast district manager for the Cryovae Co.

Ivan P. Florsheim, Jr., has resigned as president of Premium Plastics, Inc., Chicago, severing all connections with that firm. He will devote his time to Bud Florsheim Associates and Affiliated Enterprises, manufacturers and merchandisers of promotional items for dairies and other food packers, at 22 W. Monroe St., Chicago.

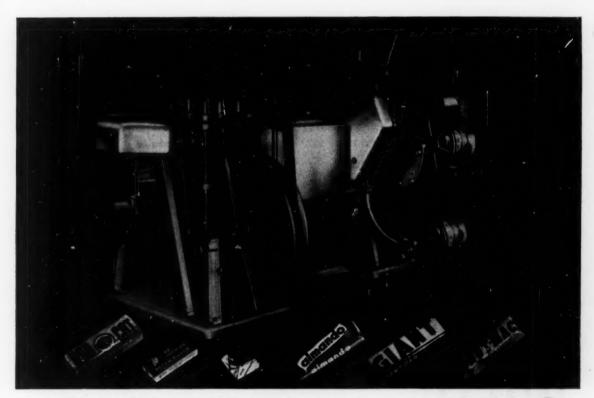
Henry F. Blake has been named gummed tape specialist with Ludlow Papers, Inc., Needham Heights, Mass. He will provide distributors and customers of the Ludlow tape line with specialized service throughout the country.

William Doran has been appointed representative in the St. Louis territory office of Oneida Paper Products, Inc., Clifton, N. J.

Potlatch Forests, Inc., has announced plans for the construction of a new milk-carton manufacturing plant at Pomona, Calif. The new plant will have a capacity of 20,000 units a month and is expected to be in operation the first of next year.

The name of Herb-Shelly, Inc., Farmington, Minn., suppliers of polyethylene packaging, has been changed to Shelly, Inc. All operations of the company will continue unchanged.

Rodger C. Derby has joined the New York office of the Carolina Paper Sales group of Riegel Paper Corp., New



UP TO 125 UNITS A MINUTE

Lynch Wrap-O-Matic handles confections, cookies, cracker sandwiches and other standard or irregular shaped products rapidly and at lowest cost. Only two operators are required—one to feed, another to case the wrapped goods. The famous Lynch die-fold with low temperature, thermostatically controlled heat seal is standard... glue seal is also available. Carcis or boats may be inserted from magazines, or from roll stock as in photo above. Exclusive Lynch-engineered features increase efficiency and cut maintenance costs of Wrap-O-Matic. Special machinery and accessories designed and built for all production problems and conditions. Write for full descriptive literature. Address department F.

WRAP-O-MATIC



Model RA Side Intake



Model RS
Cookies or Cracker Sandwiches



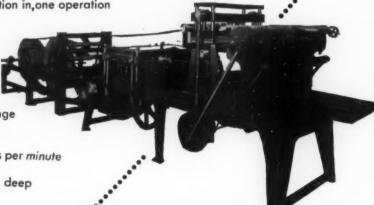
Model PB Straight Intake



Eliminate costly hand-made partitions

Your production costs can be slashed with the Inman automatic adjustable partition machine

- From roll stock to finished partition in one operation
- Only one operator required
- Clean cut, accurate and uniformly made partitions
- Machine fully equipped and easily adjustable for a wide range of sizes
- Production of 100 or more tucks per minute
- Will handle partitions up to 7" deep
- Production proven



Write for details

INMAN

Manufacturing Co., Inc. AMSTERDAM, N.Y.



Carton Tape Sealer. Top and/or bottom flaps only, plus ends as required.



Carton top flap-gluer.
And/or tape sealer as required.



A two purpose machine. One-man carten bottom flap-gluer and/or tape sealer before filling. Also seals top flaps after filling.

The Most Dependable line. GENERAL

CASE SEALING WITH TAPE AND/OR GLUE

- (1) General's tape sealer, a natural for rule 41, tape seals automatically up to 25 or more cases per minute, single-strip, top and/or bottom flaps only, plus end-panels, if required. "It's always ready." Tape also serves as dust and pilfer-proof seal. Seven feet minimum length for top flap sealing.
- (2) General's automatic top flap-gluer and or taper of filled containers has no equal. Has closed-system for gluing. There's no need for "clean-up," it's always ready. Saves 1/2 hour production time daily. CLOSED-SYSTEM CAN REPLACE GLUE-POT METHOD IN OTHER MACHINES NOW IN USE.
- (3) General's Carton Maker (see photo 3) ONE-MAN bottom flap-gluer and/or taper of unfilled cartons. A TWO PURPOSE MACHINE. Does more and better for less, ALSO SEALS TOP FLAPS AFTER FILLING. Minimum 5' wide by 9' long. HAS "U" RETURN DELIVERY to common roller table (Pat. Pend.). It has no equal.
- General's case scalers have all the design features that engineered the unequaled "General Line" for taping or gluing the "manufacturers-joint" in container manufacturing plants throughout the industry. It's really wise to General-ize. There's nothing like them.

THE BEST NAME IN TAPING AND GLUING

It casts to put off.—Wire or Phone now.— GENCO, Palisades Park, N.J. and GENCO, Hamburg, Germany

GENERAL CORRUGATED MACHINERY CO., INC.

PALISADES PARK

Windsor 4-0644

NEW JERSEY

York. He will develop sales for the production of Riegel's new bleached paperboard machine.

Robert E. Graham has been elected a vice president and appointed general



Croham

manager of the Glass Container Div., East, for Owens-Illinois Glass Co., Toledo, Ohio. He will be responsible for sales and manufacture east of the Rocky Mountains, Frederick B. Schelharn has been elected manufacturing vice president for Owens-Illinois' Mill Div.

O-I has begun operations at its new Atlanta, Ga., plant, which, according to the company, has an annual capacity of more than 300,000,000 glass con-

Tom Steinbach has been appointed planning director for Reinecke & Associates, Chicago.



Hiram Walker & Sons, Inc., Peoria, III., has promoted Robert Maier to industrial engineer for bottling operations. He replaces C. O. Smith, who has been transferred to the company's Buenos Aires distillery in South America. Mr. Maier was formerly assistant superin-

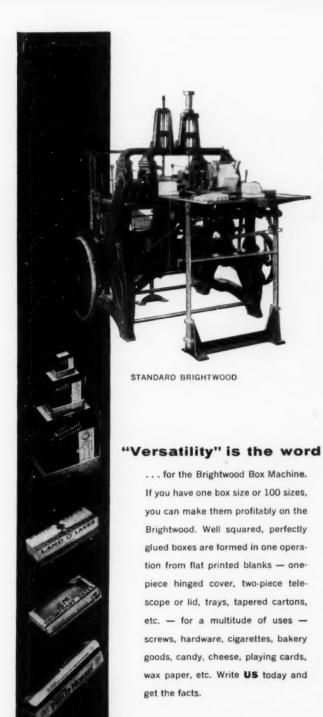
tendent of bottling operations.

Gerald M. Minne has been named assistant manager, plant operation, of Milprint, Inc.'s 11 packaging plants. He will operate from the company's headquarters in Milwaukee, Wis. Replacing Mr. Minne as plant manager at the De Pere converting plant is Eugene A. Antisdel. Paul G. Hayden takes over Mr. Antisdel's former position as plant superintendent. Frank P. Mueller has been appointed midwest manager of Milprint's Packaging Materials Service Div., with headquarters in Chicago.

Milprint is constructing an addition to its Downington, Pa., plant which will add approximately 75,000 sq. ft. to its present facilities. Completion is anticipated for next January.

The MRM Co., Inc., Brooklyn, manufacturers of packaging machinery, have additional manufacturing acquired space at 55 Hope St., Brooklyn. The firm's engineering and assembly departments of the labeling machine division have been transferred to the newly acquired plant.

Titan Chemical Industries, Inc., Colorado Springs, Colo., is now in full-scale production of aerosols at its new plant in Colorado Springs. The company, which was formed last December, will





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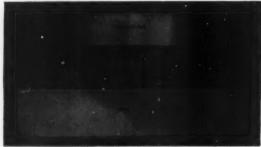


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PRODUCTION

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SERIES 50

FILLING MACHINE

International offers rotary filling machines in four different sizes, 24-head, 36-head, 48-head and 72-head. The International rotary can be operated as a straight vacuum machine, as a straight gravity machine or as a combination vacuumgravity machine. It features fluid drive, cam action heads and a central lubricating system, low friction plastic worm feed and fine fill height adjustment while running.

Container Range: Size —fractional ounce to 5-gallon

Type-round and rectangular tin; all types of glass, sprinkler top and standard cap finish.

Up to 500 containers per minute. Speed Range:

Floor Dimensions: 6 ft. x 6 ft. exclusive of conveyors. Overall

length 10 ft.

Weight: Approx. 4700 lbs.

Power-2 h.p. Motors:

Vacuum-3 h.p., 50 c.ft. per minute capacity.

Metal Type 316 stainless steel standard for Contact Parts: use in food, beverage and other industries. Other contact parts available for products with such properties as muriatic or sulphuric

specialize in containers for pressurized products such as hair sprays, shaving creams and room fresheners. Managing the aerosol division is Martin M. Revnolds and assisting him is Raymond J. Seffl, chief chemist.

Ruth Tulbert, treasurer of Breskin Publications, Inc., publishers



of MODERN PACKAG-ING and Modern Plastics, died Aug. 6 at the age of 50 after a prolonged illness

Miss Tulbert joined the Breskin organization in 1939 and was named to

the position of treasurer in 1953. During her association with the company she gained the respect and affection of officers and employees alike. She was active in the affairs of the Associated Business Publications and devoted unstintingly of her time and effort in work for the Lighthouse, the New York Guild for the Jewish Blind and other charitable organizations.

Robert C. Webster has been appointed general manager of the pressurized food division of Western Filling Corp., Los Angeles. The division was recently formed to specialize in custom packaging of food products.

Roy R. Bumsted, Jr., has been elected president of Unette Corp., Livingston,

Benjamin F. Wisner has joined the sales staff of the metal and plastic box division of Shields, Inc., New York.

Sinclair & Valentine Co., New York. has named Robert H. Crain assistant to the district manager in Oakland, Calif. Mr. Crain's former position as manager of S&V's Seattle, Wash., branch has been filled by George McLaughlin.

Dr. John A. Keenan, president of Standard Packaging Corp., New York, has been named the new president of the University of Wisconsin Alumni

J. Walter Wilson, chairman of the board of J. W. Wilson Glass Co., Inc., Brooklyn, died on July 15, at the age of 90. He had been engaged in the glass business since 1891.



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They are stars in folding cartons ... with finishes for the simplest to the most de luxe types. They are outstanding as tags, instruction charts, manual covers, and other utility items. They are top performers in protective, moisture barrier, and similar functional roles. And they play key parts in counter, window, car card, and other display and direct mail promotion.

These clay, metallic, polyethylene, and other coated products are supplemented by coating services for any purpose.

Ask for Samples - Ask for Advice

90 ULTRAGLOSS

. # 75 BRUSH FINISH

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STANDARD COATED . METALLIC COATED . POLYETHYLENE COATED

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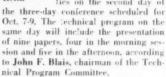


For your information

"The Impact of Packaging on Modern Merchandising" will be the subject of a talk by Carl J. Reith of The Kroger

Co., givest speaker at the luncheon being held Oct.

8 in conjunction with the 12th annual Plastics-Paper Conference of the Technical Assn. of the Pulp and Paper Industry at the Sheraton Gibson Hotel, Circinnati. Mr. Reith's talk will highlight activities on the second day of



Fourth meeting of the recently organized St. Louis District of the Technical Assn. of the Pulp and Paper Industry has been scheduled for Sept. 19 at the Le Chateau Restaurant in St. Louis, Chairman of the St. Louis group, which now has an active membership of 76, is J. J. Koenig of the Gaylord Container Corp.

Ray Dubrowin of U. S. Printing & Lithograph Co. will serve as general chairman of the Point-of-Purchase Advertising Institute's 12th Annual Symposium and Exhibit, scheduled for next April 15-17, Sheraton-Astor Hotel, New York.

More than 40,000 buyers are expected to attend the National Hardware Show, to be held in New York's Coliseum Oct. 14-18, where they will view the new, 1958 marketing approach for hardware and related items. A feature of this year's show is "automatic" marketing of familiar, pre-packaged items in bigwindow vending machines. More than 1,000 exhibitors will occupy 300,000 sq. ft. of display floor space at the show.

Deadline for entires in the 3rd Annual Contest for the Best Informative Labeling for Plastics Products sold at retail, sponsored by The Society of the Plastics Industry, Inc., has been set for Dec. 1. Entries may be labels, hang tags, inserts, packaging, etc. Awards will be made in the following classifications: Apparel, Building Materials, Floor and Wall Coverings, Hardware, Home Furnishings, Housewares, Notions, Sporting Goods, Toys and Miscellaneous. Entry blanks may be requested from SPI, 250 Park Ave., New York 17.

The Fibre Box Assn. has named the following judges for the 1957 Fibre Box Competition, to be held in Washi: gton, D. C., Oct. 17-18: E. H. Balkema, Colgate-Palmolive Co.; N. F. Behme, Jr.,

National Classification Board; C. A. Lewis, Department of Commerce; George Hamilton, Boxboard Containers: W. G. Hetzel, National Container Committee, and R. A. O'Reilly, Jr., General Motors Corp.

How to get more profits in the produce department will spotlight the Super Market Institute's regional meetings this fall. Scheduled meetings are: East, Sept. 8-10. Penn Sheraton Hotel, Pittsburgh; North, Sept. 29-Oct. 1, Coronado Hotel, St. Louis; South, Oct. 13-15, Jack Tar Hotel, Galveston; West, Nov. 3-5, Wigwam Hotel, Phoenix.

"Best Of The Year" applications for entry in the 1957 Aerosol Package Competition Awards have been mailed out by the Aerosol Awards Committee of the Chemical Specialties Mfrs. Assn. to brand owners and marketers of aerosol products. A jury of merchandisers and package designers will be named. Entries are not restricted to CSMA members and there are no entry fees. Copies of the Aerosol Contest Bulletin may be obtained from the CSMA secretary, 50 E. 41 St., New York 17. Closing date for entries is Oct. 15. Announcement of winners and presentation of awards will be made during the 44th annual meeting of CSMA, to be held at the Hollywood Beach Hotel, Hollywood, Fla., Dec. 9-12.

A regional technical conference on "Polyethylenes—Properties and Uses" is being sponsored by the Cleveland-Akron Section, Society of Plastics Engineers, at the Hotel Carter, Cleveland, Ohio, on Oct. 17. For further information and registration, contact E. J. Haskins, Zenith Plastics Co., 1009 Rockwell Ave., Cleveland, 14. Registration fee, which includes luncheon and preprints of papers, will be \$9 for advance reservation or \$10 at the conference.

Date for the Fall meeting of the National Flexible Packaging Assn., to be held at the Greenbrier, White Sulphur Springs, W. Va., has been changed to Sept. 29-Oct. 2. Major converter business problems will be covered in the morning meetings, Sept. 30 and Oct. 1. K. E. Warren of Package Products Co., Inc., will speak on the subject of de-preciation; Alden H. Sypher of Nations Business magazine will discuss the changing climate for business; W. B. Nance of Cadillac Products will discuss profit planning, and D. J. Leeker of Sears, Roebuck will give an illustrated talk on packaging and design methods employed by his company. Winners of the Second National Flexible Packaging Competition will be announced on Monday evening, Sept. 30.

The Waxed Paper Merchandising Council's program this year includes new, enlarged advertising campaigns to pre-sell housewives on food products wrapped in waxed paper and to promote the advantages of waxed paper throughout the entire food-processing

What's doing

Sept. 9-13—Instrument Society of America, Instrument-Automation Conference & Exhibit, Cleveland Auditorium, Cleveland, Ohio.

Sept. 10—Packaging Institute, Development of Corrugated Containers Subcommittee, Commodore Hotel, New York.

Sept. 15-18—Product Packaging Assn., seventh annual conference and exposition, Shoreham Hotel, Washington, D. C.

Sept. 16—Chemical Specialties Mfrs. Assn., general luncheon, Commodore Hotel, New York.

Sept. 24—Packaging Assn. of Canada, Point-of-Purchase Seminar, Royal York Hotel, Toronto, Canada.

Sept. 29-Oct. 2—National Flexible Packaging Assn., fall meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

Sept. 30-Oct. 4—American Materials Handling Society, first Canadian material-handling show and conference, Show Mart, Montreal, Canada.

Oct. 1-3—Third Joint Military-Industry Packaging & Materials Handling Symposium, Fort Lee, Va.

Oct. 3-4 Quartermaster Assn., annual convention, Fairmont Hotel, San Francisco.

cisco.
Oct. 7-9—Technical Assn. of the Pulp
& Paper Industry, 12th annual plastics-paper conference, Sheraton-Gibson Hotel, Cincinnati, Ohio.

Oct. 14-16—Sanitation Maintenance Show & Conference, Navy Pier, Chi-

Oct. 14-18—Printing Industry of America, Inc., annual meeting, Hotel Morrison, Chicago.

Oct. 14-18—12th National Hardware Show, Coliseum, New York. Oct. 17—Society of Plastics Engineers, regional technical conference on

Oct. 17—Society of Plastics Engineers, regional technical conference on "Polyethylenes, Properties and Uses," Hotel Carter, Cleveland, Ohio.
Oct. 17-18—Fibre Box Assn., annual

meeting, Sheraton Park Hotel, Washington, D. C.
Oct. 28-30 Packaging Institute, 19th

Oct. 28-30—Packaging Institute, 19th annual forum, Statler Hotel, New York.

Oct. 28-31.—Society of Industrial Packaging & Materials Handling Engineers, National Industrial Packaging & Handling Exposition, Convention Hall, Atlantic City, N. J.



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Carey Press has the specialized know-how and the specialized equipment to handle every type of package insert job. Result: Carey customers get quick delivery of high quality work at low prices. Find out how 1/16" saved more than \$4,000 with Carey-Purchasing Agent consultation.

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and packaging industries. The consumer program will feature full-page, four-color ads in national-distribution magazines, with the message, "All the Food You Serve Deserves the Protection of Waxed Paper," and displaying the Council's new seal of preferred protective packaging. Theme of the trade "More Sales Power Per program is. Package With Waxed Paper." Four publications are available for trade use: the "Hitch-Hike" Planning Guide, the "Baker's Kit," an article titled "Waxed Paper-Its Qualities, Uses, Possibilities for More Effective Flexible Packaging," and a publication titled, "How to Solve Your Bread Wrapping Problem." They are available free on request to Laurence T. Herman, executive director. Waxed Paper Merchandising Council, 38 S. Dearborn St., Chicago 3.

The packaging industry is being given special cognizance by the soft-drink industry, which is celebrating its 150th anniversary this year. The American Bottlers of Carbonated Beverages, trade association of the soft-drink industry, notes that the industry's annual sales value of more than a billion dollars depends upon bottles, cases, cartons and other types of packaging needed to promote and distribute its products. Many manufacturers of packaging materials have arranged to exhibit at the 1957 International Soft Drink Industry Exposition to be held in Washington, D. C., Nov. 11-14.

The Society of Industrial Packaging & Materials Handling Engineers has formally adopted the Engineers Creed and Canons of Ethics for Engineers pre-pared by the Engineers' Council for Professional Development and sanctioned by the National Society of Professional Engineers.

Warren E. Savant has been appointed managing director of the Citrus Container Institute, Lakeland, Fla. He will head this trade association of corrugated box manufacturers, whose headquarters are in the process of being moved from Bryn Mawr, Pa.

16-week evening course, Materials Handling and Packaging, is being given by the Industries Training School at Stevens Institute of Technology starting Sept. 30. The course offers a survey of modern handling methods. Topics to be covered include palletized shipments, automatic handling systems, carloading carrier regulations, and the design, testing and use of various types of package units. Walter F. Friedman, senior engineer of Container Laboratories, Inc., will conduct the course. Additional information may be obtained from L. Edwin Backer, director of the Industries

Training School, Stevens Institute of Technology, Fifth & Hudson Sts., Hoboken, N. I.

The Gaylord Container Corp. Div., Crown Zellerbach Corp., has completed a new color sound slidefilm titled "Simple Arithmetic In Packaging," dealing with corrugated bulk containers. The film is based on nine case histories and documents the saving in materials handling and packaging made possible by corrugated bulk containers of various types. A showing of the film can be arranged by writing the Advertising Dept., Gaylord Container Corp. Div., Crown Zellerbach Corp., 111 N. Fourth St., St. Louis 2, Mo.

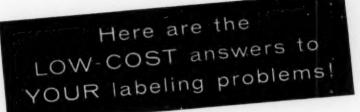
A \$250 scholarship from the California Packaging Club has been awarded to Dean H. Olson of the University of California for writing the best paper on packaging in the Consumer Packaging class. "A Look at Package Design, 1957" was the title of his paper.

The names and locations of some 250 marketing research agencies, a description of the kinds of work they do and the type of personnel comprising their staffs are contained in the 1956-1957 seventh edition of Bradford's Directory of Marketing Research Agencies. The 150-page volume was compiled and published by Dr. Ernest S. Bradford and covers marketing research agencies in the United States and throughout the world. For copies, priced at \$7.50, write Bradford's Directory of Market Research Agencies, 50 Argyle Ave., New Rochelle, N. Y.

A compilation of business films selected for their pertinence to the marketing field has just been released by the American Marketing Assn. Titled "Catalogue of Films," it is the first in a new series entitled "Marketing Education," designed as teaching aids, but with special significance also to business firms with training programs in marketing and sales. Copies of the catalog are available from the American Marketing Assn., 27 E. Monroe St., Chicago 3, at 25 cents each to association members and 50 cents to non-members; special prices on quantities of 50 or more.

A new film, "Versatility and Volume," produced by Marathen Corp. and filmed at several food-processing plants shows the fully automatic packaging of frozen cakes, coffee cakes, pies, prepared specialties, entrees and complete dinners. The 20-min. film, in sound and color, demonstrates the versatility of the Marapak-H automatic packaging machine. Arrangements for showings may be made by writing the Advertising Department, Marathon Corp., Menasha, Wis.

An informative brochure titled "Aerosols," which reviews the history and growth of aerosols, surveys the market and product field, outlines Continental's facilities and lists contract fillers and valve manufacturers, may be had free on request to Department A, Continental Can Co., 100 E. 42 St., New York 17.



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Avery pressure-sensitive Labeling offers you a new approach . . . an easier and better solution . . . wherever you need to code, identify, instruct, warn, route or inspect. It's the modern low-cost method of labeling to do the job quickly and efficiently. Avery Labels can be designed and produced in the exact size, shape and color you need . . . individually diecut on sheets or rolls for manual or automatic labeling!

1. NO MOISTENING-EASY TO APPLY

One simple motion—a fingertip pressure—and Avery Labels are on in an instant—without moistening! No waste motions in handling or sorting loose labels—no messy gluing or wetting.

2. STICKS TO ANY CLEAN, SMOOTH SURFACE

Metal, plastic, glass, cellophane, metallic paper, pliofilm, polyethylene, ceramics, wood . . . and many other surfaces . . . are being easily and quickly labeled every day with Avery pressure-sensitive Labels.

3. NEAT, SMART APPEARANCE

Will not pop, peel or curl even under extremes of temperature and humidity even stay neat and attractive with rough handling.

4. SPEEDS PRODUCTION

In all industries . . . in hundreds of ways . . . Avery Labels are saving time, labor and money every day. Avery Labeling is geared to your own type of operation—either fast, production line speed or intermittent labeling.

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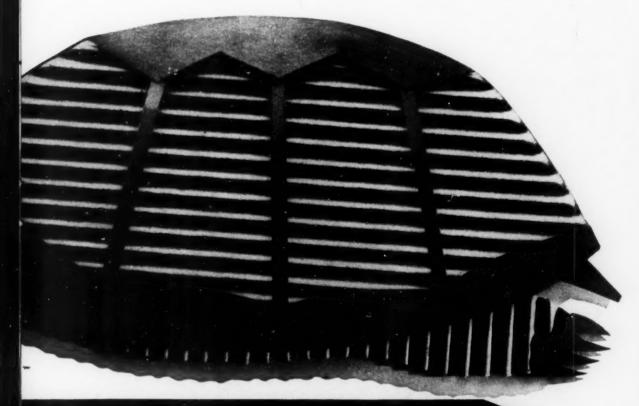
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WEATHER-TITE LINER
WEATHER-TITE DURA-CORR

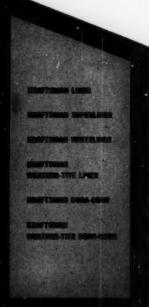
WEST VIRGINIA



When humidity is the problem, products ship safely in containers made of KRAFTSMAN WEATHER-TITE LINER and KRAFTSMAN WEATHER-TITE DURA-CORR. These quality containerboard products are ideal for shipping packaged cheese, frozen foods and other items that require refrigerated shipping or storage.

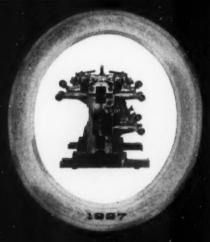
KRAFTSMAN WEATHER-TITE LINER is a special Kraft liner incorporating wet-strength resins specifically designed to meet the requirements of cold-storage and other humidity resistant containers. KRAFTSMAN WEATHER-TITE DURA-CORR is a high quality corrugating medium with extra strength and rigidity to match the liner.

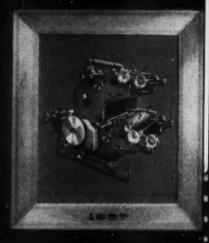
These outstanding products are two of the KRAFTSMAN containerboard family produced by Westvaco. Sharing the same superior quality and controlled uniformity, the KRAFTSMAN name covers a *complete line* of containerboard for every conversion use. For more information, call your KRAFTSMAN Representative today.



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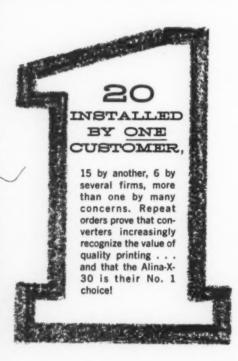






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Upgrade your printing department by installing ALINA-X-30, the flexographic press that efficiently and effectively puts color in packaging ... adds the finishing touch that makes the sale.

Investigate the many reasons that make Alina-X-30 the outstanding endprinter of the year.

EXCLUSIVE FEATURES OF ALINA-X-30 Flexographic Endprinter

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EQUIPMENT SUPPLIES SERVICES

RIGID PLASTIC CONTAINERS. Catalog price sheet describes line of stock round, rectangular, slide-cover and hinged and multi-compartmented polystyrene con-tainers. Bradley Associates, Inc. (1-751)

BAG AND WRAP PAPER SAMPLES. Folder contains sample swatches of company's paper in a variety of colors, printed with several color inks. Thilmany Pulp & Paper Company.

"PILLOW" FILM PACKAGES. Illustrated data sheet describes unit that forms, fills and seals "pillow" type packages from thermoplastic film at speeds from 40 to 100 packages a minute for 1/16 oz. to 11/4 lb. packages. Stokes & Smith Co. (1-753)

PLASTICS BAG CLOSER. Folder describes unit that applies vinyl-covered wire tape to film bags. Sample tapes included with literature. Plas-Ties Company. (1-754)

POLYETHYLENE CLOSURE. Illustrated folder describes screw-cap with polyethylene cone liner, available for 13 mm. containers to larger sizes. Illustrates principal features. The Poly-Seal Corp. (1-755)

RIGID POLYETHYLENE. 8-page booklet de-scribes "Marlex 50" polyethylene, illus-trating possible applications. Also dis-cusses company's facilities for production of the resin. Phillips Chemical Company.

ADHESIVES FOR PACKAGING. Booklet describes line of adhesives for carton sealing; multiple unit packages; boxes; folding cartons; case sealing, glass, metal container labeling. Swift & Company.

(1-757)

PORTABLE IMPRINTING MACHINE. Illustrated folder provides diagrams and specifications for motor driven production-line neations for motor driven production-ine unit for automatic imprinting of code dates on bottom of glass, metal, paper containers at speeds up to 600 units a minute. Adolph Gottscho, Inc. (1-758)

WIRE STITCHING MACHINE CATALOG. 18page illustrated catalog provides specifications for line of wire stitching machines, including models for stitching bags, cards, labels, and box making. Acme Steel Co. (1-759)

STEEL CONTAINERS. 44-page illustrated catalog describes and includes specifications for line of steel drums, pails, shipping containers, suitable for liquids, semi-solids. Also describes service for color printing of containers. Jones and Laughlin Steel Corporation. (1-760)

VIBRATORY FEEDERS. Folder describes vibratory feeders with permanent magnetic mechanism for feeding bulk materials to be packaged, at controlled quantities and speeds. Eriez Manufacturing Company.

FOIL PAPER SAMPLE KIT. Folder contains over 60 samples of colored and embossed aluminum foil paper suitable for seals. labels, wraps and box coverings. H. D. Catty Corporation. (1.762)

HUMIDIFYING EQUIPMENT. File folder contains descriptions and specifications for company's humidifying systems used for controlling humidity in areas in which such operations as printing or flexible packaging are being performed. Standard Engineering Works. (1-763)

CAN MAKING MACHINERY. File folder contains data on line of can manufacturing equipment including strip feed press, slitter, end curler, scroll shear, air testers, beading machines, flanging machines, body maker and soldering machine. Baldwin-Lima-Hamilton. (1-764)

PACKAGING HEAVY PRODUCTS, 48-page illustrated booklet contains case history studies on the packaging of heavy products such as pumps, machine parts, mo-tors, plastics and nails, in corrugated boxes. Illustrates several corrugated box styles manufactured by this company. Hinde & Dauch.

PAPER AND PLASTICS CONVERTING MA-CHINERY. Illustrated booklet describes line of converting equipment, including coaters, laminators, slitter-rewinders, un-winds, offset and flexographic printing presses, and embossers. The Black-Clawson Company, Dilts Division. (1-744)

PIASTIC CONTAINERS. Catalog describes line of stock boxes available in clear, colored, opaque, multi-colored, spray and etched varieties in many sizes and shapes. Prices included. Harkin Affiliates, Inc. (1-767)

FLOCKED PAPER SAMPLES. Sample folder shows swatches of paper coated with "Velour-Tex" flock, in several colors, available in stock roll sizes from this Mass. company, Vertipile, Inc. (1-768)

WRAPPING EQUIPMENT. Folder describes unit that splices new roll of wrapping material to depleting roll, thereby eliminating stoppage for roll change. Operates at speeds of 15 to 160 lineal feet per minute. Butler Automatic Machine, Inc.

FLAT, ROUND METAL CANS. Illustrated catalog folder describes line of seamless, flange-top, open-screw, snap-on top round metal cans. George D. Ellis & Sons, Inc.

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EQUIPMENT · SUPPLIES · SERVICES

FILINO MACHINES. 14-page illustrated catalog describes company's extensive line of piston fillers for liquid, viscous, or semi-solid materials. Includes specifications. Hope Machine Company. (1-771)

LABEL MARKER. Illustrated booklet describes unit that marks prices, code numbers on company's sew-in, gummed, pressure-sensitive labels. Soabar Co., Inc. (1-772)

BOXES FOR MAILING. 14-page illustrated booklet describes line of stock, paperboard boxes for use in postal shipment. Also illustrates gummed address labels supplied by company. The Mason Box Company. (1-773)

REINFORCED WATERPROOF PAPER. Illustrated folder describes applications for sisal, fiber-reinforced paper suitable for protective packaging and covering. American Sisalkraft Corporation. (1-774)

WAXES. 16-page booklet describes various test procedures for establishing properties of waxes. Also discusses company's facilities for manufacture of microcrystalline and paraffin waxes, suitable for packaging applications. Cities Service.

PRESSURE-SENSITIVE TAPES. Technical bulletin contains data on properties of line of paper, acetate, cloth, fibrous glassreinforced pressure-sensitive tapes for a variety of industrial applications. Industrial Tape Div., The Seamless Rubber Co.

ELECTRONIC CONTROL DEVICES. File folder provides data on electronic production timers, time delay units, sensor relays, load indicators, and other control equipment. Machinery Electrification, Inc. (1-777)

INTERIOR PACKAGING. Folder illustrates and discusses the advantages of using custom fabricated paperboard interior cushions and partitions. Paper-Wood Specialties Co. (1-778)

ROTOGRAVURE PRINTING PRESSES. Folder illustrates line of rotogravure printing equipment, including press for printing flexible packaging material, and proof press. George F. Motter's Sons. (1-779)

POLYETHYLENE SAMPLE. Literature describing company's polyethylene film is enclosed in sample of film. Includes price list. Crystal-X Corp. (1-780)

STOCK PLASTIC BOXES. Catalog sheet illustrates line of stock plastic boxes in varying shapes and sizes and novelties such as piggy banks, handbags. Includes dimensions. Consolidated Molded Products Corp. (1-781)

SEAMER FOR FIBER CANS. Illustrated folder describes equipment that applies bottoms and tops to fiber cans of 3 to 8 in. height at speeds of 100 to 400 cans a minute. Includes specifications chart, description of operating features. Potter & Johnston Co. (1-782)

COIL-FED ADHESIVE. Illustrated folder describes "Thermogrip" thermoplastic adhesives, supplied in a continuous coil-like form. Illustrates application with paper bag making machine. United Shoe Machinery Corp. (1-783)

BAG STITCHER. Booklet illustrates principal features of bag closing unit that applies single or double lock thread stitch, with or without tape. International Paper Co.

(1-784)

FLUORESCENT COLOR SAMPLES. Folder describes company's fluorescent colors, suitable for packaging, display applications. Includes several paper swatches treated with a variety of luminescent colors. Lawter Chemicals, Inc. (1-785)

FILLING EQUIPMENT. Illustrated folder describes line of can and bottle filling equipment including rotary vacuum filler, 8-stem cleaner-filler, and a unit that fills containers at speeds up to 100 a minute. The Karl Kiefer Machine Co. (1-784)

TRANSPARENT PLASTIC PACKAGES. 8-page illustrated catalog gives details on line of standard and custom-designed transparent plastic packages, including such types as "blister" and slide-cover packages. Plastic Artisans, Inc. (1-787)

SOTTLE FILLING EQUIPMENT. Brochure shows portable vacuum filler for filling sample lots of liquids, and unit that fills 40 to 60 bottles a minute. Also illustrates other liquid handling equipment such as pumps, mixers. Ertel Engineering Corporation.

SEALING AND FILLING POLYETHYLENE TUBES. Illustrated brochure describes line of polyethylene tube fillers and sealers, including bench, semi-automatic, automatic models. Shows model that operates at speeds up to 100 tubes a minute. Carbert Manufacturing Co., Inc. (1-769)

LABEL FOR FILM. Folder describes labels that can be transferred to transparent packaging material by heat and pressure and gives appearance of printed film. Also describes machine specifically designed to apply label. Dennison Manufacturing Company. (I-790)

SYNTHETIC WAX. Illustrated folder describes chemical characteristics and qualities of a hard hydrocarbon wax with a high melting point, said to improve moisture vapor transmission characteristics of materials. Moore & Munger. (1-791)

CLOSURES FOR GLASS CONTAINERS. Illustrated brochure describes line of stock molded phenolic and urea closures. Also discusses custom-designed closure service. Armstrong Cork Co. (1-792)

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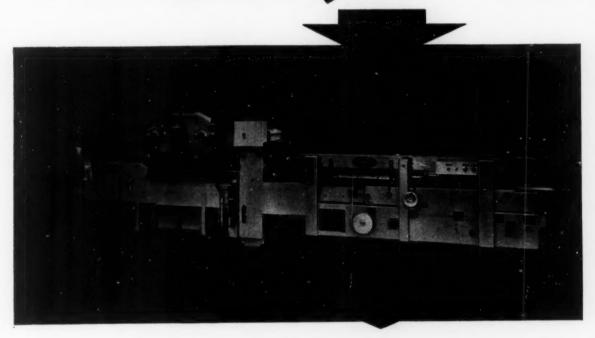
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U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Duplex Automatic Setting-Up Machine, Wallace R. Lindsay, et al., (to Inman Mfg. Co., Inc., Amsterdam, N.Y., a corporation of New York). U.S. 2,794,373, June 4. A box-forming machine comprising two forming mechanisms in transverse alignment, means for alternately feeding box blanks to each of said mechanisms, means adjacent said feeding means for applying adhesive to said blanks before arrival at said forming mechanisms and means alternately actuating said forming mechanisms to fold and press blanks into box form.

Machine for Feeding Collapsed Bottle Cartons, Hermond G. Gentry (to Atlanta Paper Co., a corporation of Georgia). U.S. 2,794,374, June 4. In a machine for setting up collapsible bottle cartons, a hopper structure provided to contain a stacked supply of said bottle cartons in collapsed form, means for stripping successively from said stacked supply the lowermost carton and means, including a pair of feed rolls, for gripping and feeding said partially stripped bottle cartons successively from said hopper structure.

Infusion Bag, Robert W. Vergobbi (to Pneumatic Scale Corp., Ltd., Quincy, Mass., a corporation of Massachusetts). U.S. 2,794,744. June 4. An infusion bag containing beverage infusion material comprising a rectangular sheet folded upon itself, said folded sheet having thermoplastic material on at least the inner faces thereof and being heat sealed along the side edges and mouth of the bag, one wall of said mouth portion extending beyond the other to expose a heat-sealable inner face portion thereof, a handle with a tag intermediate the ends thereof.

Infusion Bag, Robert W. Vergobbi (to Pneumatic Scale Corp., Ltd., Quincy, Mass., a corporation of Massachusetts). U.S. 2,794,745, June 4. An infusion bag containing beverage infusion material comprising a rectangular sheet folded upon itself, said folded sheet having thermosplastic material on at least the inner faces thereof and heat sealed along the side edges and mouth of the bag, a handle comprising a relatively narrow strip of material having one end thereof inserted and heat sealed between the walls of said mouth, a tag also having thermoplastic material on at least one side thereof, said handle being wound around the bag.

Plastic Sealing Device, Donald R. Williams, Chippewa Falls, Wis. U.S. 2,794,484, June 4. Apparatus for fusing the overlapping edge portions of two members of endless plastic material with the members being of a shape to form a container when fused and with the inner member being substantially thicker than the outer member, which

comprises an elongated mandrel having a recess at one end, said recess receiving the thicker inner member of the members to be joined together and the thinner outer member overlapping the thicker member at said recess.

Package of Artificial Sausage Casings, John W. Firth (to Tee-Pak, Inc., Chicago, Ill., a corporation of Illinois). U.S. 2,794,544, June 4. In a package of artificial sausage casings, a carton formed of moisture-resistant material and substantially oblong in plan and of rectangular cross section, said carton having two side and two end walls, outer top closure flaps hinged at their outer edges to the upper edges of said side walls, inner top closure flaps hinged at their outer edges to the upper edges of said end walls, bottom closure means for said carton and a plurality of shirred artificial sausage casings within said carton disposed lengthwise thereof.

Three-Bottle Collapsible Carrier,
Francis W. Fielding (to Lengsfield
Bros., Inc., New Orleans, La., a corporation of Louisiana). U.S. 2,794,571,
June 4. A collapsible article carrier
formed from a pattern of foldable sheet
material, comprising a peripherally continuous side wall defining three sides, a
bottom wall formed by interconnected
extensions of said sides foldable relative
to each other, an interior center partition and a cross partition.

Bottle Carrier, Harold J. Goss (to International Paper Box Machine Co., Nashua, N.H., a corporation of New Hampshire). U.S. 2,794,572, June 4. In a six-bottle carrier of paperboard, the combination of a panel insert formed of a single piece of double-thickness paperboard and forming the central, longitudinal partition of a double rectangular compartmented carrier, said panel having integral glue flaps along the lower end side edges thereof and a rigid carton formed of a single thickness of said paperboard, rigidly attached to said panel.

Lower End Construction for Fibre Drums, William J. Geist (to Continental Can Co., Inc., New York, N.Y., a corporation of New York). U.S. 2.794,584. June 4. A fibre drum wall having its lower end portion curved inwardly to form a breast, then turned downwardly and outwardly to form a channeled internal rib, then extended outwardly to form an upper annular channel wall, then turned downwardly and inwardly to provide a wall-connecting portion and then extended invardly, turned downwardly and finally turned outwardly to form an annular flange.

Blank for Folding Boxes and the Like, Arthur J. Weiss (to Robert Gair Co., Inc., New York, N.Y., a corporation of Delaware). U.S. 2.794,587, June 4. A blank in flat form adapted to be erected into a box and the like including at least side walls and a bottom, consisting of a single sheet of paperboard.

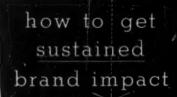
Closures for Paperboard Containers, Walter C. George, et al., tto Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,794,588, June 4. A siftproof closure means for a polygonal container comprising a body member formed of a plurality of connected-together wall panels each having outer marginal flaps, an inner liner, a closure pad and a cover panel.

Collapsible Container, Marion H. Cunningham, Providence, R. I., (to the United States Rubber Co., New York, N. Y., a corporation of New Jersey). U.S. 2,795,257, June 11. A collapsible container having a generally cylindrical body portion and end portions of a flexible liquid-impervious material, a rigid tube extending internally of the container from one end thereof to the other, a hose being of a length to extend a substantial distance out of the open end of the tube, attaching rings secured to each of several fittings externally on the container.

Explosionproof Low-Pressure Containers, Zeverly L. Lapin (to Development Research, Inc., St. Louis, Mo., a corporation of Missouri). U.S. 2,795,350, June 11. An explosive proof pressure container comprising a sheet metal tubular side wall, a sheet metal end closure having an outer edge portion joined to the side wall in a seam spun outward of the side wall, further having a portion adjacent the seam whose inner surface is normally presented sealed against and in surface contact with the inner surface of the end margin of the side wall.

Collapsible Bottle Carriers, William A. Ringler (to The Cardner Board & Carton Co., Middletown, Ohio, a corporation of Ohio). U.S. 2,795,352, June 11. A multi-cell two compartment bottle carrier formed from a single blank of sheet material having a bottom panel formed by a pair of foldably connected bottom sections, a pair of side panels, a pair of end-panel sections, a pair of inwardly extending center-partition sections, transversely extending cross partitions, a handle having a hand hole therein.

Cartons, Boye Benzon-Peterson (to Aktiebolaget Akerlund & Rausing, Lund, Sweden, a corporation of Sweden). U.S. 2,795,364, June 11. A carton of fibrous material comprising a plurality of walls forming a hollow open-ended body portion of the carton, an end closure flap hingedly connected to each wall along a crease line at the open end, each of said flaps at said crease line



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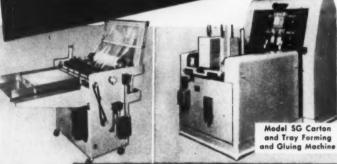
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being substantially coextensive in width with the width of the corresponding wall.

Carton for Cylindrical Objects and Blank for Forming a Plurality of Said Cartons, Grover C. Currie (to Dacam Corp., Charlotte, N. C., a corporation of North Carolina). U.S. 2,795,365, June North Carolina). U.S. 2,795,305, June 11. A carton having interconnected side walls and end walls. a plurality of top and bottom flaps spaced from the upper and lower edges of said end walls and hingedly connected to said side walls.

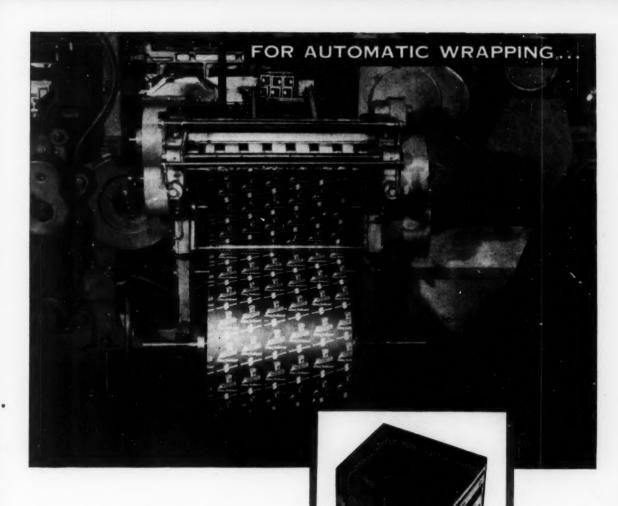
Dual-Purpose Pull Strip, Donald G. Magill, Great Neck, N. Y., (to American Can Co., New York, N. Y., a corporation of New Jersey). U.S. 2.795,366, June 11. A container for products having ingredients deleterious to raw exposed edges of fibrous materials, comprising a tubular fibre body having end memers secured thereto in end seams, said fibre body having an exposed raw edge on the interior surface thereof, a pro-tective tape adhesively secured over said raw edge on the interior of body, said tape terminating in a pull tab.

Apparatus for Filling Powdered Materials into Containers, Paul C. Aust (to Food Machinery & Chemical Corp., San Jose, Calif., a corporation of Delaware). U.S. 2,795,389, June 11. Apparatus for packaging predetermined quantities of powdered or granular material into bags comprising, in combination, a housing, a substantially horizontal discharge spout, a conveyor, a plenum chamber, a porous canvas membrane forming the upper wall of said plenum chamber, means connected to plenum chamber for introducing a gaseous fluidizing medium thereto, an opening in the upper end of said housing, a mechanism for removably holding a bag, a continuous weighing scale mechanism and a closing arrangement.

Packaging Machine, William M. Ade (to Compressed Products Corp., New York, N. Y., a corporation of Nevada). U.S. 2,795,909, June 18. A machine for packaging articles in tubes comprising a carrier, a plurality of tube holders, means to advance the carrier intermittently along a path, tube-feeding means, filling means, tube-closing means and means to maintain the holders open.

Method of Making Tight Cartons, Frank David Bergstein (to The Bergstein Packaging Trust, Hamilton, Ohio) U.S. 2,796,007, June 18. A process of producing a proofed package which comprises the steps of providing a tubular paperboard carton with enclosing body walls and closure flaps, erecting said carton, folding the flaps at an end, plac-ing the carton over a fixture to coat the end of the carton with a sealing sub-stance and withdrawing said fixture.

Closures, Giles B. Cooke and William C. Rainer (to Crown Cork & Seal Co., Inc., Baltimore, Md., a corporation of New York). U.S. 2,796,189, June 18. In combination, a glass container and a closure therefor, said closure comprising a metal shell having a top and a skirt depending therefrom, the interior sur-



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face of the top of said shell being provided with a relatively flat cushion liner for engaging in sealing relation the sealing lip of the container.

Tray with Separating Partitions, Curtis M. Shanahan (to Container Corp. of America, Chicago, Ill., a corporation of Delaware). U.S. 2,796,213, June 18. A paperboard tray and partition construction comprising a bottom panel with a plurality of hinged partition elements.

Multiple-Unit Labeled Package and Method of Making It, Lloyd I. Volckening, Glen Ridge, N. J., to Ivers-Lee Co., Newark, N. J., a corporation of Delaware). U.S. 2,796,982, June 25. A package comprising two opposed, thin, normally flat, flexible transparent sheets sealed and crimped together in zones, each of which forms and bounds a compartment between the sheets that has a commodity therein.

Card-Supported Transparent Package, Robert T. Gorton (to S. Curtis & Son, Inc., Sandy Hook, Conn., a corporation of Connecticut). U.S. 2,796,985, June 25. A display package comprising a substantially flat card having at least two plies which are secured together, one of said plies having an opening therethrough, said card being scored to provide a hinged receptacle-locking flap, said score line intersecting said opening, the other of said two plies having a three-sided cut therethrough aligned with and relatively wider than said opening and extending from said score line at least to the adjacent end of said opening to provide the flap when bent on said score line with an opening through said other ply, a hollow receptacle having an open side and a flange projecting outwardly from the receptacle's peripheral portion, said receptacle being inserted within said opening, with flanges lying between plies.

Closure, Frederick C. Schwendler, et al., (to Eaton Mfg. Co., Cleveland, Ohio. a corporation of Ohio). U.S. 2,797,016, June 25. In combination, a closure fluid container filler neck including an annular sealing element supported on the filler neck adjacent the opening thereinto, means for securing said closure to said filler neck, said means permitting axial movement between said closure and filler neck after said securement.

Closure For Pressure Vessels, Einar E. Tangard (to Combustion Engineering, Inc., New York, N. Y., a corporation of Delaware). U.S. 2,797,017, June 25. In combination, a cylindrical pressure vessel having an open end with an axially disposed cylindrical inner wall surface immediately adjacent said end, a closure positioned within said end and having a cylindrical surface, said juxtaposed to said inner wall surfaces, said juxtaposed surfaces having corresponding annular relieved portions which together form an annular recess of rectangular section radially of said vessel.

Pressure Head Seal, George A. Worn (to The Lumus Co., New York, N. Y.,



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a corporation of Delaware). U.S. 2,-797,018, June 25. A pressure vessel of the class described having an opening in the wall thereof, said wall having an inwardly facing circumferential groove adjacent said opening, a cover for said opening, a shear ring carried by said cover, a retaining ring positioned on said cover to resist radially inward movement of the shear ring and to retain it in its shear relation between said cover and said vessel wall, a flexible C-shaped gasket surrounding and embracing the projecting portion of said shear ring.

Tearing-Strip Container, Eugene F. Eike (to American Can Co., New York, N. Y., a corporation of New Jersey). U.S. 2,797,021, June 25. A tearing-strip container comprising a body member having end members attached thereto, said body member having a longitudinal side seam composed of opposed interengaged hooks, spaced parallel score lines in said body defining therebetween a tearing strip terminating at the edge of one hook of said side seam.

Container, Ralph W. Kaercher, et al., (to American Can Co., New York, N. Y., a corporation of New Jersey). U.S. 2, 797,023, June 25. A can body for holding beer and other products comprising a tubular sheet metal body having a longitudinally extending side seam, an organic base coating covering substantially the entire inside metal surface of the can body, a solid organic film superposed on said base coat and covering said side seam, an ion exchange resin distributed uniformly throughout said film and a continuous organic top coating.

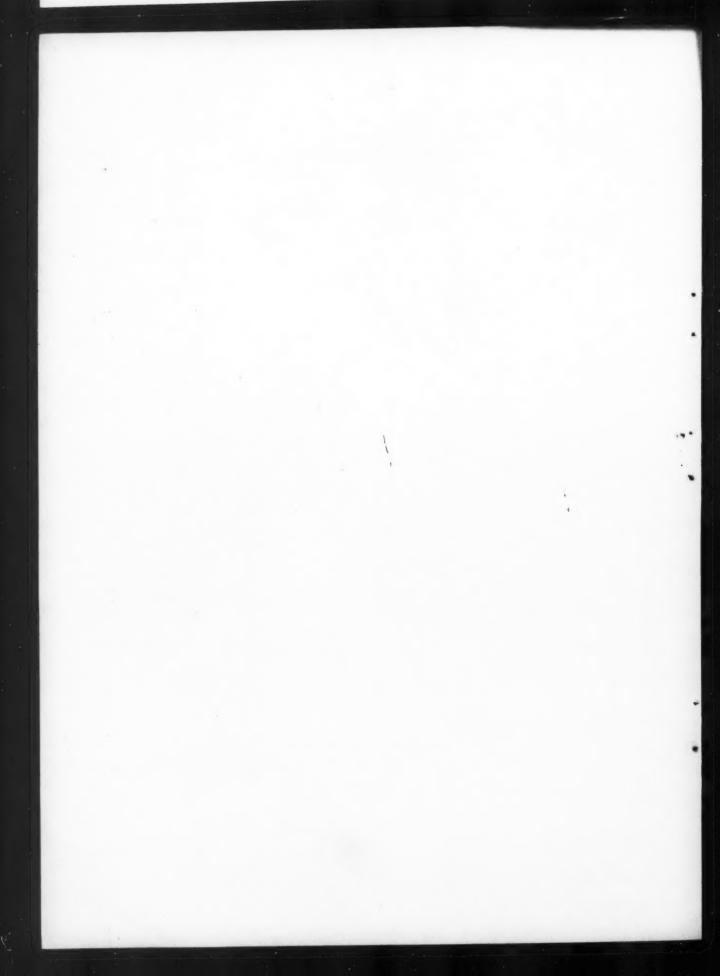
Easy-Packing Upright Container, Samuel B. Belsinger (to Belsinger, Inc., Atlanta, Ga., a corporation of Georgia). U.S. 2,797,039, June 25. An upright container comprising a body including a rear panel and side panels formed integral therewith and a separate front panel adapted to be connected to said side panels, closure members for closing the bottom and top ends of said body, a front panel having a horizontal hinge line dividing said panel into a lower section and an upper section, said lower section having flaps at each side thereof permanently connected to the side panels and defining with the side and rear panels a packing space beneath the hinge line.

Easy Packing Upright Container, Samuel P. Belsinger (to Belsinger, Inc., Atlanta, Ga., a corporation of Georgia). U.S. 2,797,040, June 25. An upright container comprising a body including a rear panel and side panels connected thereto, a front panel formed integral with one of said side panels, closure members, said front panel being divided horizontally to provide upper and lower sections, said lower section having a flap extending along its edge and connected to the other side panel to define with the side and rear panels and bottom closure a packing space beneath the upper terminus of said lower panel.



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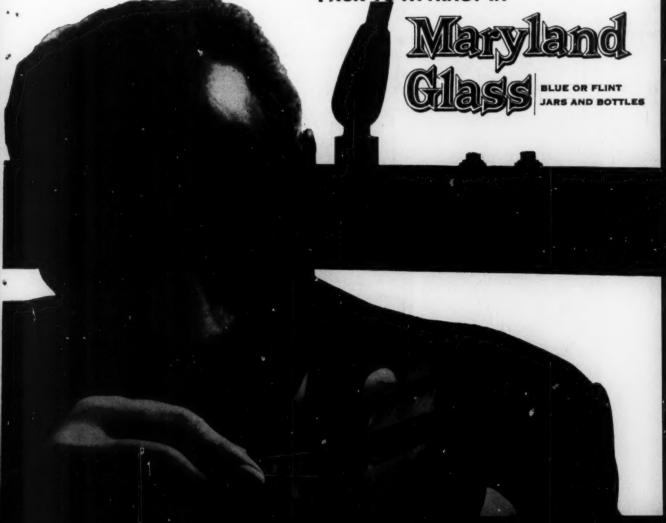
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Heat sterilization

Continued from page 1671

showed "no growth" for all samples from the sterilized packages. The bacteria virulence test was positive.

Findings

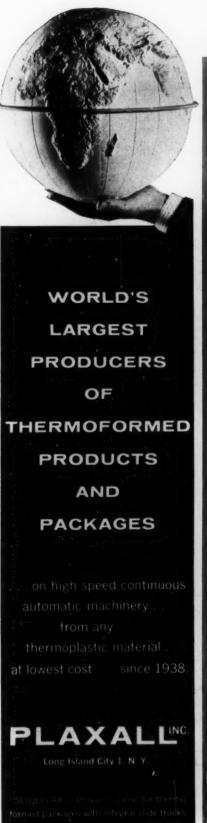
As could be expected, the tests thus established that there is a maximum ratio between the enclosed air volume and the surface of the package, which must not be exceeded if bursting is to be avoided. This ratio differs from one material to another and with each thickness, and naturally depends upon the mechanical stability properties of the material and its elasticity. Another factor is the degree to which these properties are influenced by the sterilization conditions. The border ratio will be different when sterilization is carried out in dry air or in steam.

In the cases where no bursting occurred, although said ratio of volume and surface had been exceeded, it proved that the joints of the package presented microscopic leaks through which the expanding air had escaped. Such leaks may lead to secondary infections, since a flow of air may enter the package through them.

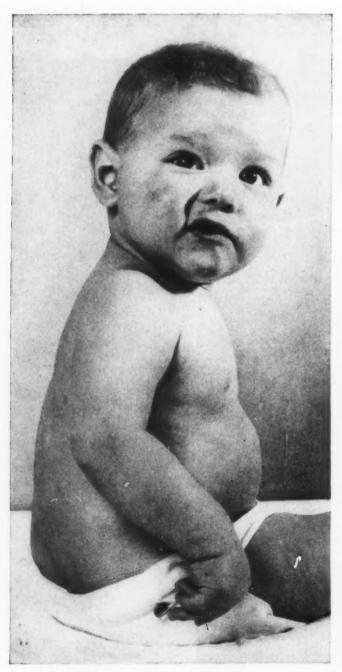
The amount of resistance to bursting of a packaging material is dependent on the moisture content of the air enclosed in the package and that of the article to be sterilized, as well as on the elasticity, and must therefore be established from case to case.

The tests further proved it possible to produce sterility in a sealed package under essentially normal autoclaving conditions, provided that a plastic material having a given high steam permeability is employed. As the coefficient of permeability shows a marked increase with rising temperature, so pronounced a diffusion of steam is obtained through the packaging material under autoclaving conditions that a sterilization is produced. Of course, the steam penetration also increases by reason of the thinning out of the plastic film caused by the stretching of the material during the airexpulsion phase.

If, on the other hand, the steam permeability approaches an infinitely high value, the package is subject to a maximum of mechanical stress, corresponding to a super-







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pressure equal to the air pressure at the temperature in question (see Table II), provided that the volume is constant and no escape of air takes place. In practice, however, both an enlargement of volume and a certain escape of air must be reckoned with. The time factor, too, is of importance.

To overcome the limitations outlined above, a small opening may of course be left in the package, which is sealed immediately after the autoclaving, but as a result thereof an instability factor has been introduced in regard to sterility.

In order that the package may not burst, it is obvious that the resistance of the seals must be not less than that of the packaging material itself. This prerequisite is not always fulfilled.

As a result of the investigation.

the following recommendations may

 Any given material should be carefully tested concerning the risk of bursting and the possibility of obtaining sterility.

2. When employing a useful material in practice, as much air as possible should be evacuated from the package before it is sealed. The article to be sterilized should be air dry before the package is sealed.

3. As a safety margin, the sterilization time or temperature should be increased somewhat considering that the package does not contain pure steam as in the autoclave, but a mixture of steam and air.

Acknowledgment

The authors express their gratitude to Dr. Torsten Nilsson for valuable assistance in this study.

Meat in polyethylene film bags

Considerable reduction in packaging time and labor costs, and superior product protection are reported by Century Provision Co., Chicago meat wholesaler, as resulting from a recent switch to polyethylene plastic film bags for wrapping choice cuts of fresh meats.

At present, the company is shipping about 20 carloads of meat each



Polyethylene bag, slipped down over upright loin, involves minimum handling of fresh meat.

week—approximately 50% of its output—in polyethylene bags. Company officials report that polyethylene has demonstrated general excellence as a meat wrap.

The new flexible bags, according

to the company, keep meat shrinkage to the minimum allowed in the industry—100 to 150 lbs. in a shipment of 20,000 to 30,000 pounds. The airtight film bags help retain the natural moisture of the meat. They also help preserve its flavor and nutritive value, as well as its fresh, bloodred appearance.

Toughness of the 0.0015-in.-thick polyethylene film used by Century Provision Co. is such that it easily withstands rough handling during shipment and its pliability is proof against cracking at freezing temperatures. Adoption of the polyethylene bags also means a meat-wrapping process that is estimated to be 40% cleaner. Wraps previously used became blood soaked, making the packs difficult to handle; dripping on floors and counters has been eliminated.

Economical use of the polyethylene film also has dictated the development of specially sized bags for the various cuts of meat. Loins are packed in a 26-by-36-in. bag; shanks and rounds, in a 26-by-28-in. bag; bags measuring 25 by 5 by 29 in. are used for the larger rounds and chucks.

Supplies and services: Polyethylene film by Bakelite Co., Div. of Union Carbide Corp., 30 E. 42 St., New York 17. Bags by Equitable Paper Bag Co., Inc., 45-50 Van Dam St., Long Island City 1, N. Y.



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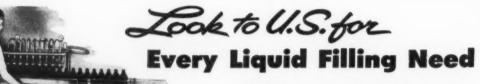


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Packaging symposium

The third Joint Military-Industry Packaging and Materials Handling Symposium will be held Oct. 1-3, at Fort Lee near Petersburg, Va., under the auspices of the Departments of the Army, Navy, Air Force and Commerce, and the National Security Industrial Assn. According to the plans released by the Army, the three-day program will include keynote speeches, panel discussions, exhibits and field demonstrations. A reception followed by a buffet dinner will be held the evening of Oct. 1.

Panel discussions by representatives of the Army and industry will occupy the afternoon of the first day. An Army panel will cover: packaging and handling for the future army, aerial delivery techniques, food packaging and transportation developments, current Army packaging practices, and packaging and materials handling for guided missiles. The industry panel will be made up of experts in various packaging categories.

Navy and Air Force problems will be featured at the second morning session. Navy panel topics also will include analysis and review of changes in specifications and documents related to packaging.

A tour of the Aerial Delivery School will be held the second afternoon, together with an exhibit of packaging and handling methods. The final day of the event will be given over to an all-day trip to Blackstone Air Field.

The Army recommends that those attending the symposium plan to arrive during the afternoon and evening of Sept. 30 when the meeting registration desk will be open. Billets and meals will be available at Fort Lee, but a list of hotels and motels in the area has also been prepared. An Army representative with Government transportation will meet all scheduled trains arriving at Petersburg Sept. 30 and Oct. 1 to bring visitors to the registration building.

Registration cards may be obtained from the Procurement Division, Office of the Deputy Chief of Staff for Logistics, Department of the Army, Washington 25, D. C., or from the National Security Industrial Assn., 1107 19 St., N.W., Washington 6, D. C.

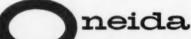


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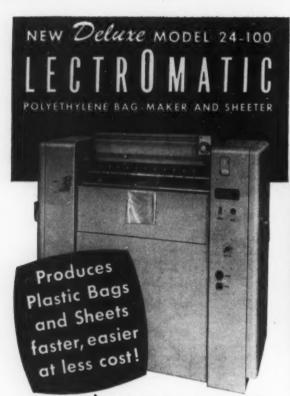


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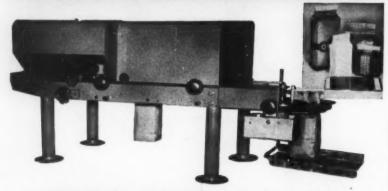
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New York 6. New York

Molded plastics

Continued from page 1231

shows promise of combining some of the properties of polyethylene and nylon to produce a low-cost. boilable material with a harder, less waxy surface than polyethylene.

WHAT'S AHEAD

It is obvious that the plastics industry today has set its sights for big game in the container market. A relentless effort is being made to compete with the long-established container industries through:

► Molding materials supplied at steadily lowering prices in contrast to the steadily rising costs of metal. paper and glass.

Low-cost volume container production by the use of more efficient molds and smaller, faster injectionmolding equipment.

New thin-wall designs that conserve materials.

New formulations of materials that offer new protective properties, including the possibility of molded plastic containers that will hold vacuum-packed, hot-processed foods,

► More automatic packaging-line equipment to put molded plastic containers on a basis of production efficiency comparable with older forms of packaging.

► Education of consumers to the concept of expendable throw-away containers just as they have accepted throw-away cans, cartons and glass bottles.

During the present period of abundant purchasing power, when shoppers can afford to spend a few cents more for the plastic package that convinces them of quality, the climate is right for the rapid growth that eventually, on a mass-production basis, will eliminate the premium still usually required for a plastic container.

In the food field, it has been estimated that if molded plastics achieve only 10% of those markets where they already have made inroads, it will mean:

40 million containers per year for cottage cheese

200 million for ice cream

400 million trays for meat

100 million egg cartons

171 million trays for tomatoes.

Even plastic milk containers are

in the realm of possibility and that is a market now taking 25 billion nackages per year.

Just a few of these big-volume uses will be enough to put molded plastics into a class with the giants among package-supplying industries.

A year in film

[Continued from page 127]

of climate, as was required for this product. Polyester film proved satisfactory because of its greater stability, high tensile strength and long life under all conditions.

Some of Ever Ready's calendar pads have pages printed on both front and back, and the company splits this type of pad into two halves and sets them side by side on a U-board to display the pages as they would appear in use. Such packages are only about 5% in. high.

Ever Ready is using a ½-mil polyester film coated on both sides to a total of about ¾-mil thickness.

The machine developed to perform the wrapping-sealing operation will accommodate rolls of film from 834 to 1634 in. wide. Film in six different widths wraps calendar pads of 11 different sizes and shapes.

Sealed packages are automatically kicked onto a conveyor from which they are loaded by hand into center-slotted corrugated shipping cartons. These hold 50 or 100 packages, depending on size. Loaded shipping cartons are stapled at top and bottom simultaneously.

The cost of materials in the film-wrap package, in Ever Ready's experience, is about the same as that of the conventional carton. U-boards are printed like the carton front and ends by the same supplier. Packaging efficiency has been increased, however, and the time-saving, waste-eliminating, self-sell qualities of film-wrapped calendar refills have evoked favorable comment from dealers wherever they have appeared. Dealers' handling and identifying tasks are simplified.

Ever Ready is so convinced of the new package's worth that it plans to step up production soon with a second wrapping-sealing machine so that different-sized pads can be packaged simultaneously and at least one line can be kept operating while the other is being changed over to handle a different size.

Creative Papers from the mills of Mosinee

... are custom-tailored to specific needs... particularly packagers'

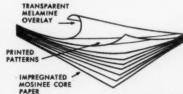


Paper uniformity speeds production of Consoweld's laminated plastic

Consoweld Corporation manufactures a variety of lifetime wall and countertop surfacing. This laminated plastic is made by impregnating specially manufactured papers with synthetic resins. Backing up the beautiful, colorful pattern sheet are 7 or more sheets of special Mosinee paper. Not any paper will do. The one used must absorb exactly the right amount of the expensive resin. And Consoweld finds Mosinee papers' uniformity of caliper and basis weight speeds production.

Mosinee, with nearly a halfcentury of sulphate paper making experience, was able to develop and quantity-produce this special paper. Perhaps Mosinee Creative Papers can help solve your problems. Our technological experience is at your disposal. Simply fill out and mail the coupon.

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In addition to these advantages, Mr. R. H. Cardwell, Jr., of C. W. Antrim & Sons, Inc. also reports, "We can fill spices directly into a prefabricated bag which is then inserted in a rigid container. With a minimum of adjustment, a flip of a switch, we can change over to pressure pack filling or gross weighing directly into containers. The auger-type mechanism delivers a constant, smooth flow when handling either free-flowing or oily spices. Four point lubrication is all that is required because the 'EG' is electrically controlled, reducing mechanical parts to a simple belt drive and shaft instead of a complicated, hard-to-maintain mechanism."

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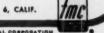




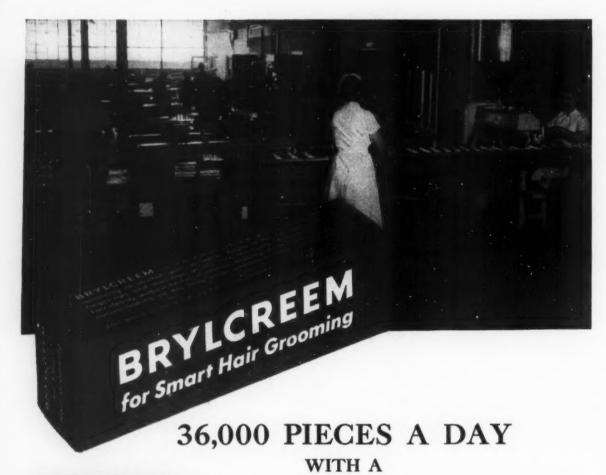
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AUTOMATIC OPERATION

With the Model 40 handling the cartons automatically from hoppering through closing, with the product inserted manually, Brylcreem cartons 36,000 tubes a day with only one operator. Other users report production up to 40,000 cartons a day per machine.

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The savings effected by the use of the Model 40 can be sub-

stantial: lower carton costs, lower labor costs, faster, neater cartoning. In addition, the Model 40 can handle a wide range of carton sizes... providing a minimum investment in machinery for packagers using various carton sizes.

Get the full details today. Write for brochure.

The CECO Model 40, like all CECO Glue Sealers and Cartoners, is a self-contained unit, mounted on casters for easy portability. Models are available to tuck both ends, or glue seal both ends, or tuck one end and glue seal the other. It can be used as a set-up machine to close one end only. It automatically produces clean, square, strong cartons at lowest cost.

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School of Packaging

The packaging course at Michigan State University, started only five years ago, has been elevated to the status of a School of Packaging. effective immediately, and will be backed by a non-profit foundation to be known as the Packaging Foun-

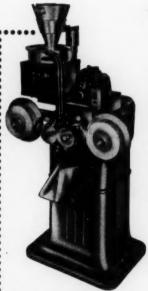
Originally one of five curricula in the Department of Forest Products. the School of Packaging will remain under the administrative direction of Dr. Alexis J. Panshin, head of the Department of Forest Products. The Packaging Foundation, designed as a means of channeling industry support to the School independently of the statecontrolled university, will be operated by a Board of Trustees including three officials of the university and two representatives from industry.

Packaging has become one of the fastest-growing curricula in the university. Starting in 1952 with one student and one instructor, it graduated 45 seniors this year and will have about 200 students enrolled in the coming school year. Michigan State is the first and only college to offer a four-year course leading to a degree in package engineering and its packaging graduates are in great demand in industry. Graduates are given a broad basic knowledge of all phases of packaging.

The new Packaging Foundation's stated legal purpose is: "To aid and promote by financial assistance and otherwise all types of packaging education and research at Michigan State University . . . including full authority to receive donations, bequests and devises . . . and generally to do all acts and things deemed necessary or expedient for the development, expansion and extension of such education and research."

The Packaging Foundation has three immediate goals, according to Dr. Panshin: the provision of a suitable physical plant to house the School of Packaging, with a tentative goal of \$2,000,000 for the purpose; support of a research program in the field, and support of a graduate program for advanced stu-

A Research Fellowship Award by Modern Packaging, providing \$2,000 a year for graduate study, will become operative this fall.



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SAMPLE PACKAGES



Registration of printed material is possible with Wrap-Ade Unit Packagers.



Feed system is available for packaging LIQUIDS—such as Say Sauce, Ketchup, etc.

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of the most popular small offset machines in the imprinting and numbering field today. This versatile machine imprints and numbers cartons, envelopes, booklets, cards and heavy stock. It is also ideal for quality offset reproduction of catalog pages, bulletins, folders, direct mail-even pieces of odd shapes and sizes. Model 245 imprints by three methods: Linotype slugs, rubber plates or presensitized offset plates. It also produces bank note quality numbering, plus perforating! You get close register and alignment because Davidson's patented gripper bar chain delivery has positive control over every sheet, from impression to delivery. Ask for "Questions & Answers" booklet and Bulletin on "Numbering" ... use the handy coupon.

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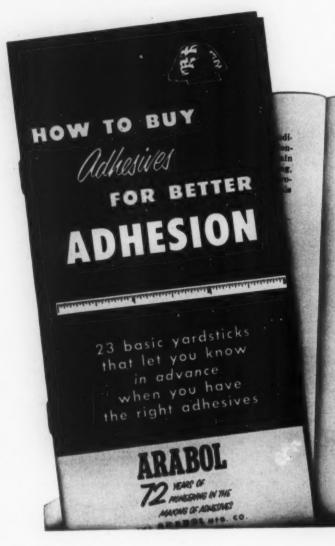
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MP-9-7





- 8 is moisture-resistance a factor? (Excessive humidity or aweating, climatic changes in shipping or in end use, such as in toilet articles or medicine containers in a steamy bathroom?)
- 9 is water-immersion resistance a factor?

 (Consider the adhesives which hold labels tightly on bottles when immersed in ice water.)
- 10 Will your product or package or shipping case ever encounter salt water? (Arabol specification adhesives were used on cases and cartons of food not medical supplies that were often floated ashore during World War II.)
- 11 Is flexibility, rigidity or warping a factor?
- 12 is toxicity a factor? (In dry film or under operating conditions?)
- 13 is pH a factor? (Must if be acid, neutral or alkaline?)

We would like to send you a copy of this 8-page booklet—without cost or obligation. You can read its six inside pages in five minutes or less. There is every possibility that you will find therein a way to save time and money in your manufacturing, packaging, labeling or case-sealing operations.

The adhesives you use are among the least costly of all the materials you buy. The finest adhesives—made to exacting specifications for each particular application—cost (per thousand applications) only fractions of pennies more than do run-of-mill adhesives. Sometimes they cost less. The advantages—in terms of satisfied customers—are worth many dollars.

The booklet gives you a list of 23 questions which help you determine what qualities and characteristics you most need in your adhesive requirements. The

questions are those any business man can answer, even though not technically trained. (The booklet also makes the offer of cooperative research to the technical men in your organization.)

We invite the opportunity to present the case for adhesives made to exact specifications—for each adhesives application

cations—for each adhesives application

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in your plant. We are prepared to submit formulated samples—for tests to be made in your plant—under your particular working conditions. That is the one kind of testing that assures you of satisfactory results.

It is our privilege to serve the leaders in a hundred industries—and thousands of small users. Your inquiry for the "How To Buy Adhesives" booklet will bring a prompt response. Kindly address your request to Department 67.

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rom packer to store to home. Milprint foil proteins the above products every step of the way to accure flavor perfection. But more than this, the coarkling appetite appeal of lin-line Electricas in Milprint rotogravure gives them the calling impact that seeps 'em on the move—with that inviting "Buy me now!" look reated by Milprint!

First to print foil successfully, Milprint still tools the field with brilliant, full color precision printing that self-every blue, every day. For the widest variety of printing processes and packages in attendary available envelopes, call your Milprint min.

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Fluorescent whiteners

[Continued from page 172]

formulas. Nickerson (8) has reviewed the small-color-difference formulas. She found that the correlation of results of all of the small-difference formulas with visual observations showed no great advantage of one formula over another. Hence, the formula to be selected for use in a particular case should depend upon the form of the color data. Thus, if the color data are in spectrophotometric terms, the "chromatic value" formula of Adams is most convenient. In this calculation the tristimulus values are first converted to "chromatic value" by means of tables which have been published by Nickerson (9). When the Adams equation is solved for the color difference AE of a colored specimen from theoretical white, the following equation results:

$$\Delta E = 40 \{ [0.23](10 - V_x) \}^2 +$$

$$(V_x - V_y)^2 + [0.4 (V_x - V_y)]^2 \frac{1}{2}$$
 (5)

The factor 0.23 is the weighting factor that relates a difference in "reflectance" to a difference in "tint." However, it might be found

that this factor should be made larger or smaller to get the best correlation with visual whiteness for a particular investigation. It is expected that this value should hold fairly well in whiteness comparisons when the samples are held in close proximity. Substitution of the Adams Equation 5 in the Judd equation for whiteness (equational) gives the following:

$$W = 1 - 0.435 \{ [0.23 (10 - V_x)]^2 + (V_x - V_x)^2 + [0.4 (V_x - V_x)]^2 \} \}$$
 (6)

With the qualification that the value 0.23 might have to be changed to get best correlation between instrumental and visual judgments, Formula 6 is recommended for calculation of whiteness from data obtained with a spectrophotometer.

Evaluation by means of Equations 4 or 6 is limited to nonfluorescent samples for instrumental reasons and therefore does not apply directly to papers dyed with Calcofluor White. There is no reason why the theory of these methods will not apply; it is only necessary to adjust the instrumentation so that the fluorescent light becomes an integral part of the measurement.

Any instrumental method would still be under the disadvantage that there is no universally accepted white; consequently, visual matching of a submitted standard or submission of a range of whites for selection by the ultimate user remains as the most practical answer to the problem of evaluating white on paper.

Applying fluorescent white

These versatile materials can be applied to the fibre in several ways. While they are generally substantive to the cellulose fibre, we would recommend that each specific product be evaluated for each purpose. The illustrations show several steps in the evaluation of the Calcofluor Whites which are examined for value as paper whiteners. They can generally be added to the paper fibre at almost any phase of its operation. The previous discussions have been primarily pointed toward the beater-addition or the pulpaddition phases of paper making, but it is also possible to add the fluorescent whitening materials at various other stages of the paper manufacturing process.

The fluorescent whitening materials can also be added to the coating color to improve or brighten up the whiteness obtained by clay, calcium carbonate and the normal white pigments which have been tinted to a blue-white prior to application to the paper. Here again, it is desirable to add the material at the mixing stage to get the most satisfactory results.

ø.

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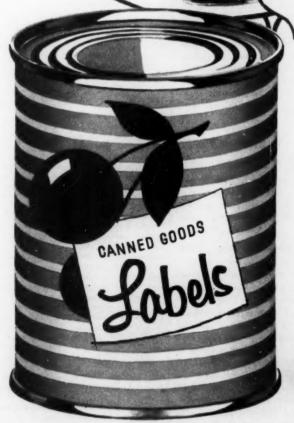
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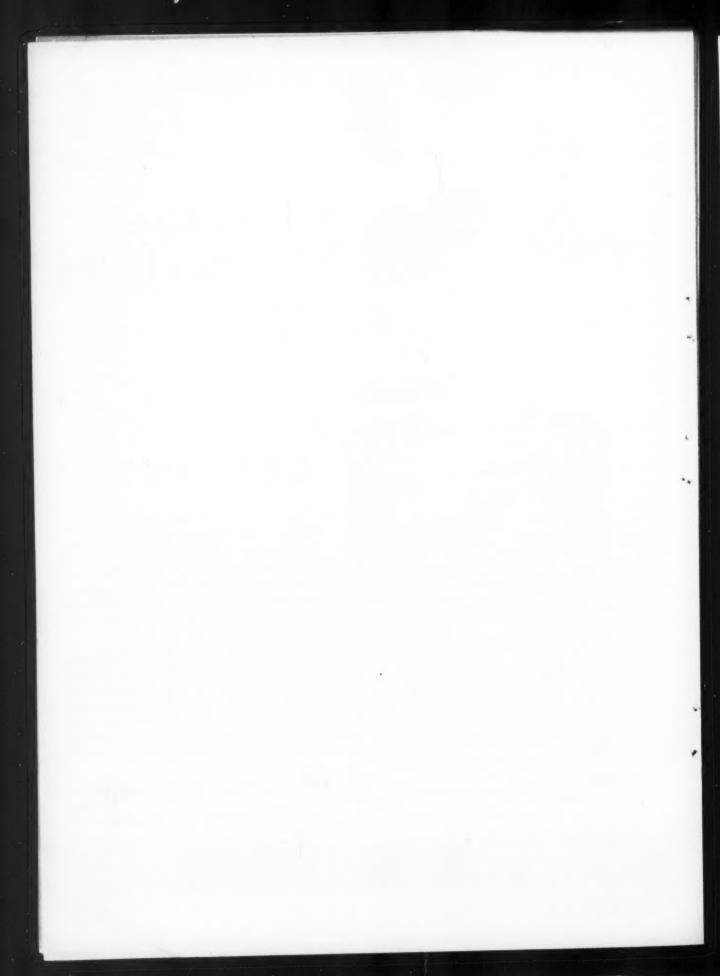


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and special "breath image"
ink which is, as you might
expect, visible only when
breathed upon. The second
type of "now you see it" marking
is illustrated by production control
numbering of radio tubes with a
Markem 45AG machine, instead
of hand stamping them. Numbers
are removed and replaced by a
trademark imprint when tubes are
completed. Thus even "temporary"
marking, done the Markem way, can be useful

Seven come eleven, and other games ... like the sporting goods story told here previously, are all part of "industry's marking requirements." They

also show how Markem sees the job through, from machine to final mark. Using a standard 25A machine, with special fixtures suggested by Markem, one manufacturer is now printing one side of 15 td. w. and the standard standard to leaf stamping them individually, the Markem method has cut costs and boosted output tremendously —resulting in a second

machine order. A similar business is running up their score, printing game tiles 132 at a crack with a special 25A. Whether your business is games, drugs, electronics, textiles, shoes or another field—your marking problems have answers at Markem.

R,

From Bolgium to Brazil...languages, customs and clothes may be different, but all share a common requirement for identification/decoration marking. Take pharmaceutical houses: in Chicago, New York and other U.S. locations...in Panama, Belgium, Brazil, Turkey and other spots around the world, Markem 45AE machines are imprinting batch and date codes on small cartons for drug items. Wherever your business is located, and whatever your marking needs, it may

whatever your marking needs, it may well pay you to see what Markem can offer. Ways to mark products, parts, packages—for decoration, identification or control—have been Markem's business for almost 50 years. Some good answers have been developed in that time—some that probably can help you.

When writing, state size, shape, material of item to be marked; rate needed, color requirements, etc. Include sample if possible. This saves time, insures the right machine and method for your job. Markem Machine Co., Keene 1, N.H.

MARKEM

PI Annual Forum

Details of the program of the Packaging Institute's 19th Annual Forum are gradually nearing completion as the Oct. 28-30 meeting approaches. The forum, to be held this year in the Hotel Statler, New York, is being built around the theme, "Planning Tomorrow's Packaging Today."

Speakers at the Production Line Seminar, scheduled for Tuesday. Oct 29 have been announced by Roy W. Abling of Merck Sharp & Dohme Div. of Merck & Co. Mr. Abling himself will keynote the seminar with an address along the line of the forum's theme. Other participants will be: Thomas Glvnn of John H. Breck, Inc., who will outline the advantages of package equipment standardization; James T. Rutherford of the Mercury Div. of Ford Motor Co., speaking on the importance of effective scheduling and materials handling, and Richard Wellbrock of the New Jersey Machine Corp., who will discuss price, quality and service from the packaging manufacturer's point of view. In timing the production-line seminar, ample provision has been made for audience question and answer opportunities.

The Stag story

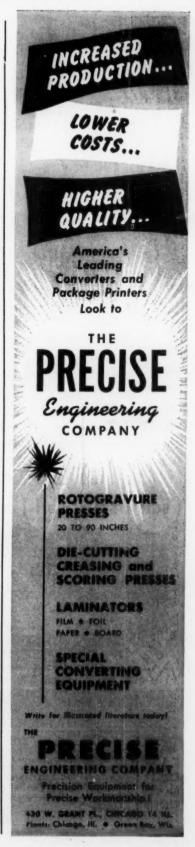
[Continued from page 158]

process of elimination, this group eventually was worked down to six fragrances, after which the final selection was made through exhaustive panel tests.

Production coordination

With containers and labels chosen, the next step was coordination of the many outside suppliers' specifications to fit art requirements. The finished artwork on all items was handled by Rexall's art director, Larry Goodwin, in order to maintain a uniform appearance. To control the color in actual production, Rexall furnished each supplier with duplicate color chips.

Actual production contact with outside suppliers was handled by F. B. MacNamara and James L. Eagan of Rexall's St. Louis manufacturing division. In order to keep a tight control on the entire line, one man at the St. Louis plant was made responsible for production





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Resolution of the Community of Change and Labeling

coordination. It was his responsibility to supervise the suppliers, detailing them with color, paper stock and material specifications. He in turn submitted color samples of all materials—plastics, caps, etc. to Rexall headquarters in Los Angeles.

Once final color had been approved, sample runs were made during October on the entire line. These samples were presented the following month to a group meeting of Rexall's sales and marketing top management. Merchandising and marketing phases were handled by Ed L. Ramsey, C. Ray Sanders and Wesley J. Hickman. The whole line was accepted enthusiastically at this meeting and plans were immediately launched for January selling to Rexall druggists by the firm's field sales staff.

Promotion

In the meantime, Rexall's Sales Promotion and Advertising Department began work on a campaign to introduce the line in its April national advertising. The necessary promotional material was prepared concurrently so that, when all was in readiness, Rexall had a complete merchandising plan—not only for its own salesmen, but for the Rexall druggists as well.

Following is a partial listing of items featured in the complete promotional package:

- ► Salesmen were provided a de luxe sample case and educational material, together with ½-oz. miniatures of the After Shave for sampling purposes.
- Considerable educational material was made available to salespeople in the drug stores, together with attractive counter leaflets to hand out to customers.
- ► A full assortment of colorful window and in-store display material was provided, along with free newspaper mats and TV and radio spot announcements.
- ► A special introductory combination deal was also offered to help launch the line.

And so, in the short space of nine months, a nationally distributed line of 13 items has been completely revamped and launched on a new career for which the entire Rexall organization—from headquarters right down to the corner drugstore—has great expectations.

Hansella PACKS

for high sales appeal

low production costs

from the printed reel to the finished pack

and

When you use Hansella pillow-type bags you benefit from a combination of advantages that adds up to sales stimulating packaging at low production costs. Here are the chief features that account for the growing popularity of pillow-type packaging:

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The HANSELLA 125 is a complete packaging line in one machine.

It automatically forms, fills, and seals—making bags up to 6" x 7". And a specially developed electronic sealing device permits the use of *unsupported* pliofilm, PVC, saran, vinyl, and other thermoplastic film materials. The impulse sealer processes *unsupported* polyethylene.

Handles SOLIDS · GRANULES POWDERS · LIQUIDS · HARDWARE

Consider these Hansella 125 features in terms of stepping up your operation:

Interchangeable Heat Sealing Units. Machine is fitted for either heat-pressure, impulse, or electronic sealing.

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High Output. Up to 3600 bags per hour with the standard or electronic sealer, and 2400 per hour with the impulse sealer.

Compact and Sturdy Structure. $3'4'' \times 15'11'' \times 12'5'' \ high.$

Write for complete information on the Hansella 125 today.



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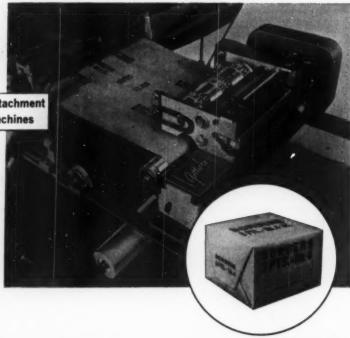
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Fits All Wrapping and Bundling Machines

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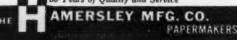
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Compact multipacker

[Continued from page 145]

folded down and across the bottom of a group of six cans. Simultaneously, die-cut tabs at one end of the blank are locked into openings in the other end to hold them together as the adhesive bond sets.

A conveyor takes multipacks from the cartoning machine to a casing machine that groups them in eights and pushes them into a shipping carton.

Positioning of the carton blank feeder at the discharge end of the machine makes it easy for the single operator to refill the hopper while maintaining continuous inspection of the loaded cartons. A buzzer warns when the hopper needs refilling and the machine stops automatically if the hopper is empty, or if the can line is not filled.

The multipack carton used by Pabst has slots at top and bottom through which chimes of the tightly packed cans protrude to prevent shifting or sliding. It uses less board and is said to be less costly than cartons requiring end flaps to hold cans in place.

Printed in blue, red, yellow and gold inks by rotogravure, the paper-board carton is decorated on one side with the company's trademark superimposed on a photographic reproduction of a glass of beer, with fried chicken in the background. A cartoon collage on the opposite face includes a full-color reproduction of the Pabst beer can.

No more decanters!

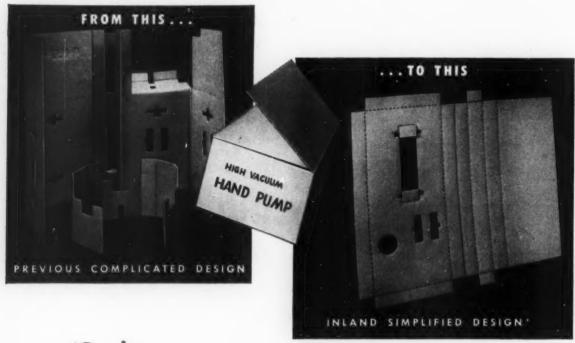
[Continued from page 115]

packaging program is in accord, the company says, with the sentiment of liquor wholesalers, who have gone on record urging that "in the best interests of the industry and the public, the industry abandon decanter merchandising and restrict itself to the sale of alcoholic beverages rather than the sale of articles in which they are packaged." The wholesalers urged that gift wrappers be adopted instead to encourage gift buying.

Nor will the glass-container industry shed any tears if this proves to be the beginning of the end of the decanter spree. For the last two years the glass makers have com-



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Your Inland package engineer is a corrugated shipping container specialist. When your product packaging is entrusted to him, you can be sure you are getting the benefit of every possible packaging economy applicable to your product.

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plained that design, mold and production costs for decanters were so excessive, and selling prices so limited by competition, that they'd prefer to stick to standard bottles. In fact, a year ago there was a report that one of the largest glass companies was going to force the issue by refusing to make any more special-mold decanters. But the issue is now apparently resolving itself.

The new pre-wrap program relies strongly on automatic cartoning and a new type of wrapping machinery that can handle the output of a high-speed bottling line-more than 100 units per minute-economically and efficiently despite the need for frequent change-over of materials and machines to package bottles of many different sizes and shapes under a wide variety of labels. These machines-five cartoners and 10 wrapping units-are going into operation now in five of the company's plants: in Frankfort, Lexington and Louisville, Ky., and at two plants in Cincinnati.

Each installation consists of an automatic cartoner that forms the unprinted, white paperboard folding carton, inserts the bottle as it comes off the filling and sealing line, and closes the carton before passing it to the first of two wrapping units mounted in tandem.

Packages from 6 to 14 in. long, 3 to 7½ in. wide and 1 to 5 in. high are wrapped with foil and heat sealed on the first machine, and overwrapped on the second with cellophane at speeds up to 150 per minute on this straight-line set-up. Packages move through the machines on a single level without changing directions.

Received from the cartoner on a belt infeed, the cartoned bottle rides into a vertical web of foil which passes around it and is cut at the bottom. As the package moves toward the heat sealer, the leading bottom flap is pulled downward by a vacuum to permit insertion of the trailing bottom flap to provide a tighter wrap. End flaps are folded as the package enters a 3-ft. heat-sealing unit, from which it emerges on a compression belt to perfect the seal.

It will be noted that with this method of wrapping, the motion is straight through. There is no elevating mechanism as on conventional



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- Fills two or more containers at a time — synchronizer attachment for increased multiple fills.
- Fills directly from drum or container—simply drop inlet hase into liquid.
- e Electronic, veriable spe drive.
- Handles oils, extracts, equeous solutions, and other free flawing or semi-viscous fluids.

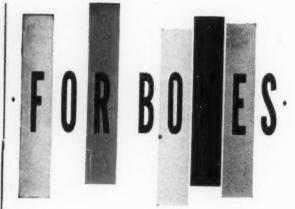
Now — a low cost, compact liquid filling machine that takes up little more space than a typewriter. Unexcelled for short-run filling. Conveyor attachment for completely automatic filling — up to 120 containers per minute. Easy to clean. Set up for use in minutes. Over 2000 in use.



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Cut your drying costs, increase your drying speed and get perfect drying on all converting operations with the Liica Far Infrared Drying System.

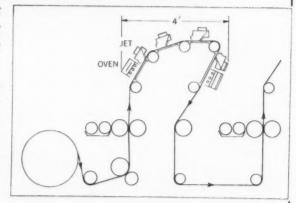
You do not run any risk or incur any obligation in determining the best drying method for your products. We operate a 20" wide pilot machine at our works in Branford, Conn. For a small charge per day, you can do as many test runs on our machine as you wish with the assistance of one of our engineers.

For more information, contact:

COMAC, Converters Machine Co.

22 West Putnam Avenue, Greenwich, Connecticut
Canadian Representative GUSTAV A. LANGEN

104 Southvale Drive, Toronto 17, Canada



Two ovens and four jets installed in combined coating, printing and varnishing machine using water-based inks on paper and board—dry weight of coat 6¼ lbs. 3,000 sq. ft. have been dried at speeds of up to 500 ft./min. Power consumption for an 80"-wide machine costs only 68 cents per station per hour.

wrappers made by the same supplier.

By using a foil-paper laminate with a vinyl plastic adhesive printed over the printed decoration at the proper spots—believed to be the first time that this has been done with liquor pre-wraps—the company is said to save 15 to 20% of the cost of foil-paper-adhesive-tissue laminate conventionally used for such wraps. The plastic coating is printed in a narrow strip across the web for the side seal and in wedge-shaped areas along each edge for the end seals.

The second wrapping machine takes the foil-wrapped, sealed package from the compression belt and applies the printed cellophane overwrap.

While change-over takes about 50% longer than with slower-speed wrappers used for similar jobs, the new machines reportedly operate about twice as fast. Two of the new wrappers with two operators do the job that formerly required four machines and four operators.

Wrapped packages are loaded into a shipping carton, where ribbon bows, pine cones or other embellishments are attached to the top of each gift package by hand.

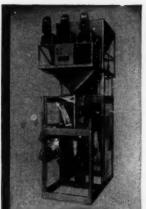
By giving liquor dealers gift packaging that the company feels is practical and salable, National Distillers believes it is in a stronger position than ever this year to win its share of the \$1-billion worth of business done in wine and spirits during the holiday gift-giving months of November and December.

Decanters plus wraps

Instead of gift wrapping in place of decanters, Schenley Distillers Co. announces that it is combining the two for this year's holiday packaging, with as many decanters as last year. Advertising will emphasize both features strongly.

Plain cartons for the decanters will be overwrapped with decorated aluminum foil and embellished with ribbon bows. Mandatory data will be on printed, perforated, detachable labels. These packages entail no extra charge to retailers, according to the company.

In addition, Schenley plans to offer multiple units packaged in reuse containers, such as brief cases, fishing creels and ladies' hat boxes at an extra charge for business gifts.



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forms . fills . . . seals. bags

AT LOWEST COST!

The lowest priced 3-in-1 packaging machine by far—pays for itself in 1 year or less! Easy to set up, simple to operate, Verti-Pak reduces handling costs, eliminates waste, speeds packaging. Now in use in many leading plants, VERTI-PAK is a profitable investment for the small, as well as large plant!

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Verti-Pak is available with auger, volumetric, turret, conveyor and piston feeds and with exact weight scales for packaging almost any product—food products, candy, nuts, dry goods, hardware, toys, plastics, drugs, etc., etc.

Complete Line of Heat Sealing Equipment
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POLYETHYLENE or with
CELLOPHANE AND POLY-CELI

NEW COSOMATIC PRESS

Eliminates slow, costly
silk screening, hot stamping,
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Rotary Attachment
Prints on Circular Objects!

AVAILABLE in 3 standard
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and models to suit production needs.

Now you can print many items never before possible. The Cosomatic Press prints either letterpress or offset on three different levels—up to three different colors, simultaneously! Print flat, round, raised or recessed items in production quantities or short runs, quickly and economically.

Developed after many years of research, the Cosomatic Press is now being used by leading companies throughout the United States. For latest information and folder, mail coupon today.

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Laminating With Acetate Film

makes a glamorous difference in packaging

Crisp new look . . . deeper, brighter colors . . . clearer printing . . . more attractive illustrations—the laminated package always stands out from the crowd.

That's why laminated containers continually score high where competition is the keenest—like the Kaywoodie and Hanes packages, prize winners in recent packaging competitions.

Even the most ordinary package becomes a glamorous showcase with an outside layer of sparkling acetate film. And with laminating's packaging versatility, this can be true of practically any type of box—folding or set-up. And by die cutting before lamination, you can make an eye appealing laminated window box.

Find out for yourself how this single improvement can transform a box that carries merchandise into a glamorous container that sells merchandise.

Write Celanese for complete information.

Celanese 8



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FOR SALE: Packaging machine, Hayssen Model 7-11-UF. Excellent condition, 6 years old, used very little. Suitable for wrapping meats, soft goods, toweling, paper, etc. Handles packages from 4x7 to 7x11, and up to 34 inch thick. Has ½ hp TEFC single-phase motor, variable speed drive, thermostatic heat control on heat-seal bars, electric wrapping control. Equipped for 110 volt. 60 cycle service. Cost \$4000 new, now only \$1000 f.o.b. Midland. Reply to A. W. Rhodes, Box 592, Dow Corning Corporation, Midland, Michigan.

FOR SALE: Model 200 "Niagara" Bag Filler and Closer, "Scott" Net Weigher, other accessories—for fill of granular material into 3½" x 2" x 5" to 12" high gusset sided cellophane bags, fold-over, and seal. Slightly used, f.o.b. N. Y. C. area. Priced for quick sale. Reply to General Baking Company, 420 Lexington Avenue, N. Y. C. 17, attention Mr. J. H. Sauter.

FOR SALE: Triangle G 2 C Packaging Machine, double loading, had very little use, can be used for candy, grains, etc., new in 1948, it has Electronic balancers. Best offer takes it. Reply Box 718, Modern Packaging.

FOR SALE: WORLD'S LARGEST STOCK of wrappers—Rebuilt and guaranteed. At great saving. All types and sizes of wrapping machines now available for immediate delivery. Pneumatic Scale late style Packaging Unit with Automatic Feeder, Bottom Sealer. Filler, Top Sealer and all interconnecting conveyors. For giant size box. Package Machinery Co. FA. FA2. FA3 and FA4 Wrappers with and without Electric Eye. Hayssen adjustable Wrappers—3"-7". 5"-11" 7"-13". 7"-17", 5"-19", 12"-24", 15"-25". With and without Electric Eye. For cellophane or wax paper. Heat seal or glue seal. Hudson Sharp Campbell Models 296. 29% and 2910 Cellophane Wrappers. Jones Automatic Carton Forming and Filling Machine. Standard Knapp 429 Automatic Carton Sealer. Tell Us Your Requirements. Write, Wire, Phone Collect. Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N.Y.

Materials Wanted

CLEAR ACETATE WANTED: Butyrate, Hi-Impact. All other Plastic Scrap in any form. CLAUDE P. BAMBERGER. INC.. One Mount Vernon Street, Ridgefield Fark, N.J. Telephone: HUbbard 9-5330.

Help Wanted

SERVICE MECHANIC FOR REDINGTON-PACKAGING MACHINES: We have a good job available in the area comprising Metropolitan New York. New Jersey. Eastern Pennsylvania and New England, for a mechanic for servicing Redington Machines. Write to us, supplying details of your experience, age, marital status, union affiliation. etc., addressed as follows: F. B. Redington Co., 3000 St. Charles Road, Bellwood, Illinois.

WANTED: Manufacturer's Representative for one of the larger and leading manufacturers of set up paper boxes in the following territories: New York (Metropolitan area), New Jersey, and Southern New England. Would prefer someone handling allied lines. Fine opportunity for substantial volume. Reply Box 916, Modern Packaging.

FLEXOGRAPHIC INK CHEMIST: Experienced in formulation development and control. To head newly established Flexographic link Dept. of progressive young company. Salary open. Liberal fringe benefits. Excelent opportunity for qualified individual. Submit resume in strict confidence. Reply Box, 707, Modern Packaging.

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containers and custom molded articles seeking top flight representation throughout the
country. Straight commission in protected
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PACKAGING MACHINERY SPECIALIST: To adapt automatic packaging machinery to run new CRYOVAC roll film. Experience on some of following equipment necessary—FB-1. Wrap King. Battle Creek, Hayasen. etc. Should be willing to relocate in Eastern New Jersey and travel. Salary commensurate with ability. Please reply stating qualifications to: J. DeCaprio, Division Sales Manager. The CRYOVAC Company. Division of W. R. Grace & Co., Cook Plaza, Madison, N.J.

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SALESMEN WANTED: We are printers and converters of cellophane and polyethylene located in New York City. Openings available for men with experience in New York. Pittsburgh, Ohio. Boston and North Carolina. Our complete line of flexible packaging materials offers an excellent opportunity for the right men. All replies held in strict confidence. Reply Box #709. Modern Packaging.

WANTED: Superintendent or General Manager with successful background in all phases of folding carton work including inline gravure printing and cutting. Reply Box No. 708, Modern Packaging.

MANUFACTURERS REPRESENTA-TIVES: to sell outstanding printed line of polyethylene bags and rolls—conventional constructions plus unusual forms for out-of-the ordinary packaging. Several good areas available. List other lines handled in first letter. Write Shelly. Inc., Division of Brown & Bigelow, Farmington, Minnesota.

Situations Wanted

POSITION WANTED: AT PRESENT TECHNICAL DIRECTOR AAA-1 COMPANY DIVISION operating in non-ferrous foil rolling, extrusion. laminating, coating. vacuum metal evaporation. Metals, papers, boards, films, adhesives and colors. Electronics, containers and structural. Military and commercial. Technical and policy. Wish to change; available for one or two days per week on permanent basis. Reply Box 710, Modern Packaging.

SALES POSITION: Ambitious young man. 27. college honor grad, hi-type, with sales and sales management experience with top volume nationally recognized packaging firm, seeking sales position in corrugated or flexible packaging field. Position must have executive growth potential. New York, New Jersey, Conn. area. Reply Box No. 712. Modern Packaging.

NEW PRODUCTS of interest to you? Then my record of new packaging developments and research management with one of the largest companies in its field should be of interest. I will consider only a position of real responsibility in these areas. Reply Box No. 713, Modern Packaging.

SITUATION WANTED: ENGINEER. B.S. in M.E., M.I.E. Creator of a new food packaging process maximizes flavor and shelf-life by reducing oxygen pickup to less than 0.1 percent between filler and closure sections, with twenty years experience in design and development of products and automatic machinery, cost-conscious, inventive, shirt sleeve worker is available. Reply Box No. 715, Modern Packaging.

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AUTOMATIC INJECTION MOLDS: Convert manually operated molds to automatic. Higher quality—lower unit costs. Reply to: MCI Plastics Corporation, RD #1—Lakewood, N. J.

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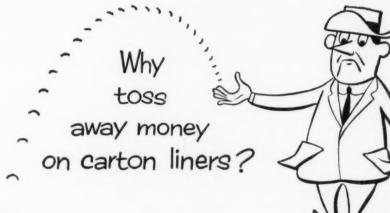
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3



Now! Protection without liners!



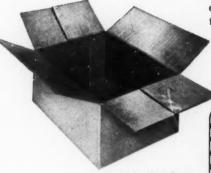
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Ac Polyethylene



Coated Snap-Stitch Carton Courtesy Victory Container Corp.

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Tell me more about new coated corrugated cartons.

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Gardner Board and Carton Co., The

81 Gaylord Container Corporation

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ENGLAND

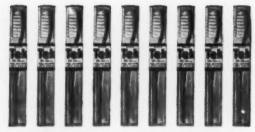


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